Infantry

May-June 2013

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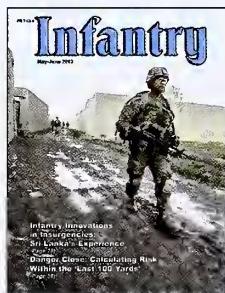
FRONT COVER:

An Infantryman with Company B, 1st Battalion, 187th Infantry Regiment, 3rd Brigade Combat Team "Rakkasans," 101st Airborne Division (Air Assault), conducts a dismounted patrol, during Operation Sham Shir on 24 April 2013 in Sahak, Afghanistan. (Photo by SGT Joshua S. Edwards)

BACK COVER:

A platoon leader and forward observer with Bravo Company, 3rd Battalion, 15th Infantry Regiment, 4th Infantry Brigade Combat Team, 3rd Infantry Division, patrol near Combat Outpost Sultan Khel in Afghanistan on 6 June 2013. (Photo by SGT Julieanne Morse)

Commandant's Note

BG DAVID B. HAIGHT

PLANNING FOR THE EMERGING THREAT

Over the past three decades, we have learned a great deal from the war in Afghanistan. During the Cold War, we observed the Soviet Union's effort to defeat the diverse threat groups that went under the name Mujahideen. The enemy the Soviets faced in Afghanistan displayed few tactical, logistical, or doctrinal capabilities to match those of Soviet combined arms forces, but the Mujahideen showed themselves to be resourceful, adaptable, and implacable, adapting their own tactical countermeasures to defeat the technological edge of the Soviets. Fort Leavenworth has published a great deal of detailed information on both the Soviet experience and our own, and this is enabling us to project what the future threat and appropriate countermeasures may look like. The demands of future war are at best difficult to anticipate, but we can nevertheless apply the experience gained to prepare our leaders and Soldiers to meet future challenges. The dismounted Infantry squad will remain the foundation of the decisive force, and in this Commandant's Note, I want to discuss future geographical areas of interest and some of the priorities of the Maneuver Center of Excellence (MCoE) and outline initiatives we have thus far instituted to achieve our goal of improving the combat effectiveness of the fighting force and the resilience of Soldiers and Families.

World populations are feeling the pressure of increased competition for resources, internal instability based upon economic, ideological, and religious factors, and competition for markets. Likewise, numerous actors — each with their own agendas, objectives, interests, and allegiances — have given rise to unprecedented instability within nations around the world and have threatened regime change in countries such as Egypt, once a reliable ally of the United States. Whether this will be the case in countries such as Turkey, Jordan, and Saudi Arabia remains to be seen, but the rapidly increasing non-state actors along the Pacific Rim in the Indian subcontinent and in sub-Saharan Africa are bringing long-established social and governmental structures into question. If our Army units are to serve effectively in these regions, their role will demand detailed knowledge of the language, political structure, and history of the region, and the MCoE has already initiated programs to facilitate that learning. First among these is the Advanced Situational Awareness Training (ASAT) that is offered to officer and enlisted personnel throughout the year. Ideally, each Soldier graduate will be a sensor, able to assimilate and work within a host nation population, to the highest degree possible conversant in the language, and able to perceive and assess what is going on in his immediate environment. ASAT also teaches the Soldier to become so familiar with his environment that he can immediately identify anything that is out of place and take appropriate action. This is a tall order, and learning the skills taught in ASAT can be a career-long process. Linked to this goal is a maneuver self-study program that will enable leaders to better understand the profession of arms, leadership, and the responsibilities of officers and NCOs. While readings are suggested and the resources available for the many aspects of professional development, this is far from a correspondence-type learning tool and instead relies upon media resources such as the branch magazines, guest speaker programs, and mentoring by active duty and retired leaders. In this issue of *Infantry*, we have included an article on Sri Lanka's experience in defeating an insurgency that had actually evolved into its own state while the legitimate government was reduced to conducting positional defense. One lesson of this article is that a small nation willing to learn the tactics, techniques, and procedures (TTPs) of counterinsurgency and commit the resources necessary to train and support a competent force can defeat even the most tenacious enemy. We have selected two other articles for this issue that address improvised explosive devices (IEDs) and offer insights into patrolling and the employment of aerial assets to interdict insurgents. Related to the aerial counter-IED subject is a thought-provoking piece on training for the enemy threat posed by his unmanned aerial vehicles (UAVs). As our potential adversaries acquire their own UAVs, we need to be ready to deal with them, and this offers suggestions on how to go about it.

Feedback from the field is an integral and valued part of what we do at the MCoE, and your input has contributed greatly to our ongoing revision of the program of instruction (POI) for the Infantry Basic Officer Leaders Course (IBOLC). The evolving insurgent threat in Afghanistan and in other potentially threatened regions remains a high priority and is integrated into IBOLC instruction on counterinsurgency and stability operations. The subject matter includes cultural awareness instruction, models on successful units, and is a response to student requests for even more material than was formerly in the POI.

We recognize that deployed Soldiers are exposed to significant and persistent danger for extended periods of time and that the cumulative effects of successive deployments can exacerbate the effects and lengthen the time required to recover from the strains of combat and reintegrate back into normal life. The Comprehensive Soldier and Family Fitness Program is an initiative that includes the dimensions of physical, emotional, social, and spiritual fitness to increase the resilience of Soldiers and Family members and has helped Soldiers and their dependents to better deal with situations that in many respects are unique to our profession. Our Army Team — Soldiers, Family members, and Civilians — does a tough job, and does it well. I welcome your input on how the MCoE is doing and what we need to do better.

One force, one fight! Follow me!

CSI RELEASES INTERACTIVE HISTORICAL STUDY

NANCY PLATT

The Combat Studies Institute (CSI) has released its first multimedia interactive historical study titled *Vanguard of Valor: Small Unit Actions in Afghanistan, Enhanced Edition,* which is now available in the Apple iBooks format. By taking advantage of the latest technology, the new iBook offers eight immersive accounts of combat actions in Afghanistan. This iBook is CSI's first book that tells the Army's story in a fully interactive manner. The chapters in the book include interactive features such as:
- 3D digital terrain views
- Video from combat actions
- Interactive digital models of weapon systems and vehicles
- Interactive maps and charts

Over the last decade, CSI has offered both the Army and the public historical accounts of contemporary operations. This enhanced edition of *Vanguard of Valor* serves to document the combat experiences of Soldiers at the platoon and company levels in Afghanistan. Because of its immersive features, the book is ideally suited for use in the Army leader development system where the interactive elements will lead to enhanced understanding of tactics, leadership, and the raw courage often displayed by U.S. Soldiers in the heat of battle.

Other Recent CSI Releases Include:

16 Cases of Mission Command — Edited by Donald P. Wright, Ph.D.

Art of War Papers - Lansdale, Magsaysay, America, and the Philippines: A Case Study on Limited Intervention — MAJ Andrew E. Lembke

Great Commanders — Edited by Christopher R. Gabel, Ph.D., and James H. Willbanks, Ph.D.

A list of publications is available online at http://usacac.army.mil/CAC2/csi/csipubs.asp.

The Combat Studies Institute provides a wide range of military historical and educational support to the Combined Arms Center, Training and Doctrine Command, and the U.S. Army. CSI researches, writes, and publishes (via the CSI Press) original interpretive works on issues of relevance to our Army and the defense of our nation. The institute conducts an oral history program that collects experiences from contemporary operations. CSI also conducts leader development opportunities in the form of virtual and live battlefield staff rides for the Army.

For more information on CSI, visit the CSI website at http://usacac.army.mil/cac2/CSI/.
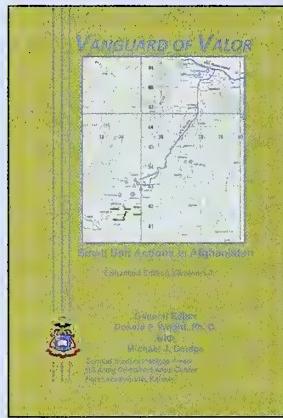
IBOLC UPDATES, RETOOLS POI

NICK DUKE

Soldiers currently working their way through the Infantry Basic Officer Leaders Course (IBOLC) are being taught a program of instruction (POI) that few have seen before.

In January, IBOLC rolled out its new counterinsurgency and stability operations class. The program shares some similarities with the previous program, but is mostly new material.

"We took a comprehensive look and basically retooled our entire program," said CPT Paul Cheval, a senior platoon trainer for D Company, 2nd Battalion, 11th Infantry Regiment. "We've refined our cultural instruction and also provided the students with some models that allow them to see what units are currently doing that are allowing them to be successful. It gives them something a little more concrete and in-depth."

The process of updating the course began in October 2012, and was completed in December before rolling out after the start of 2013. Cheval said one of the reasons for the update was feedback from past IBOLC graduates.

"A lot of it was actually coming from students wanting better instruction on how to conduct operations," Cheval said. "We were teaching a lot of theory and concepts and big picture stuff. We weren't focusing on how a lieutenant could be successful in conducting counterinsurgency operations."

CPT Timothy Downing, D Company's commander, said the updated course is a hybrid class that uses material taken from a combination of revised Army doctrine and lessons learned during the war on terrorism.

"We've continue to develop this program and improve the program, and we're always looking for new ways to take lessons learned and make ourselves better," Downing said.

Downing said this new program will be key in preparing future officers for the evolution of

the insurgent threat not only in Iraq and Afghanistan, but also in future conflicts.

"The insurgencies we've experienced so far have continued to evolve, and the threats have continued to evolve," he said. "We are preparing for what we term a hybrid threat. In the future, if we ever go to war with a modern military, there's a potential that after the force-on-force combat, we will be moving into a hybrid threat, where units will break down and you will go into guerilla-type warfare at the platoon and squad level, with the potential to form back up."

One of the biggest changes to the program is the addition of Tactical Conflict Assessment and Planning Framework (TCAPF) instruction.

"TCAPF is probably one of the biggest application pieces that we teach to lieutenants," Cheval said. "If I had known about TCAPF or had access to it as a lieutenant, I would have had a much easier time. The counterinsurgency challenge is a human challenge. It's partly tactical, partly social, and partly political. TCAPF really allows you to figure out the source of instability in your area, and that's

often a challenge for brand new second lieutenants."

Another change focuses on negotiations.

"In negotiations, we talk a lot about how to determine the best alternative to a negotiative agreement," Cheval said. "Basically, if the negotiation completely fails, we teach them to figure out what they can walk away with and just to have that comfort and understanding that negotiations aren't about a position. They're about how both parties can get to a better outcome."

In addition to the classroom instruction, the IBOLC Soldiers will have to take the skills and techniques they have learned and apply them in a variety of training exercises.

"We've taken a two-part approach, where one part is where we introduce them to urban operations, and we go through basic urban operations and how you would move in and around an urban area," Downing said. "… The second part is next week, when we go into our platoon exercises, including a platoon live fire and then our company attack. Those

platoon exercises will focus on some of the concepts that we're teaching them in the actual counterinsurgency classes now."

The exercises will also include the hybrid threats that Downing said will be key to the Army's efforts going forward.

"Most of the platoons will face that insurgent-type small unit fight, and as they progress through the week, the forces that they fight will become more organized, culminating in the company attack, where you have multiple forces coming together to defend a strong point, so that transitions from insurgents back to a more conventional force," he said.

(Nick Duke writes for Bayonet & Saber, *Fort Benning's weekly newspaper.)*

IBOLC students made history in May as the first IBOLC class to conduct live-fire training with a high explosive anti-tank projectile. The training event was part of heavy weapons familiarization training for IBOLC's C Company, 2nd Battalion, 11th Infantry Regiment at Fort Benning, Ga.

Photo by Patrick A. Albright
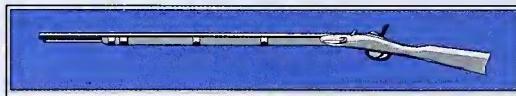
EIB: New Master Skills Test Focuses on Weapons Proficiency

Of the more than 500 Infantrymen who attempted to earn the Expert Infantryman Badge (EIB) at Fort Benning, Ga., in March, only 63 walked away with the badge after completing the rigorous, five-day test.

"It's definitely tough, realistic training," said MSG James Hill, NCOIC for the EIB testing. "They get placed in complex scenarios, which they may encounter when they're deployed in an operational environment."

Before beginning testing, the Infantrymen participated in a weeklong train-up. Veteran instructors showed them proper techniques for the various events they would be tested on, including day and night land navigation, first aid, patrol lane tasks, searching an individual, radio operation, traffic control lanes, and moving under direct fire. The test also includes a 12-mile foot march and the Army Physical Fitness Test. For the latter, candidates are held to a higher standard — they must achieve 75 points per event rather than the traditional 60 points.

New this year, a master skills test focusing on weapons proficiency precedes each of the three situational training exercise (STX) lanes. There are three weapon stations per lane for a total of nine different weapon systems.

"The Infantry School consistently adjusts our training in order to mirror the operational focus we might see when we deploy," Hill said. "When I went for my Expert Infantryman Badge in 1996, it was basically 40 round-robin stations ... and you were expected to execute the tasks without error. That holds true, but the basic setup is slightly different. The situational training exercise concept mirrors what an individual candidate will see in an operational environment."

Candidates must succeed at each master skills test before proceeding down the STX lane. Candidates who cannot complete a task receive a "no-go" and are given one opportunity to try again before they're out of the competition. Each candidate is allowed only two no-goes during the entire week of testing. Candidates who complete testing with all "goes" are recognized as "true blues." Fourteen of the EIB recipients from the Benning test earned the true blue title.

"Attention to detail is what gets candidates through," Hill said. "Each task has several sub-tasks, and if you miss one of those sub-tasks, you'll get a no-go on that event.

"I received my EIB as a corporal. You'll have PFCs that receive their EIB the first time and you'll have sergeants first class that it takes three and four times. It's really rank immaterial. It's all about attention to detail and how well you are able to perform underneath intense pressure." Some of that pressure comes from time limits. For example, the .50 caliber machine gun procedures have a 30-second time limit.

SFC Elijah Plante, NCOIC for the urban lane, said the candidates were motivated during the week of training — something they needed to hold onto for the real test.

"Everybody who's here, they want their EIB, and they're here for a reason," he said. "We're going to support them. We're going to give them the best training they need and that we can provide. As long as they're motivated, they pay attention and give it 100 percent, they will achieve their EIB this year."

The 198th Infantry Brigade senior drill sergeant said the EIB was something every Infantryman should have.

"It defines the men from the children," he said. "It says that I am tactically proficient with all my tasks in my MOS. If you want to stand above your peers, you need to achieve it as soon as possible."

According to the U.S. Army Infantry School's EIB website, the "purpose of the EIB is to recognize Infantrymen who have demonstrated their mastery of critical tasks that build the core foundation of individual proficiency that allow them to locate, close with, and destroy the enemy through fire and maneuver and repel an enemy assault through fire and close combat."

For more information on the EIB, testing standards, and other resources, visit http://www.benning.army.mil/infantry/EIB.

(This article was adapted from an article by Cheryl Rodewig, which was published in the 29 March 2013 issue of The Bayonet.)
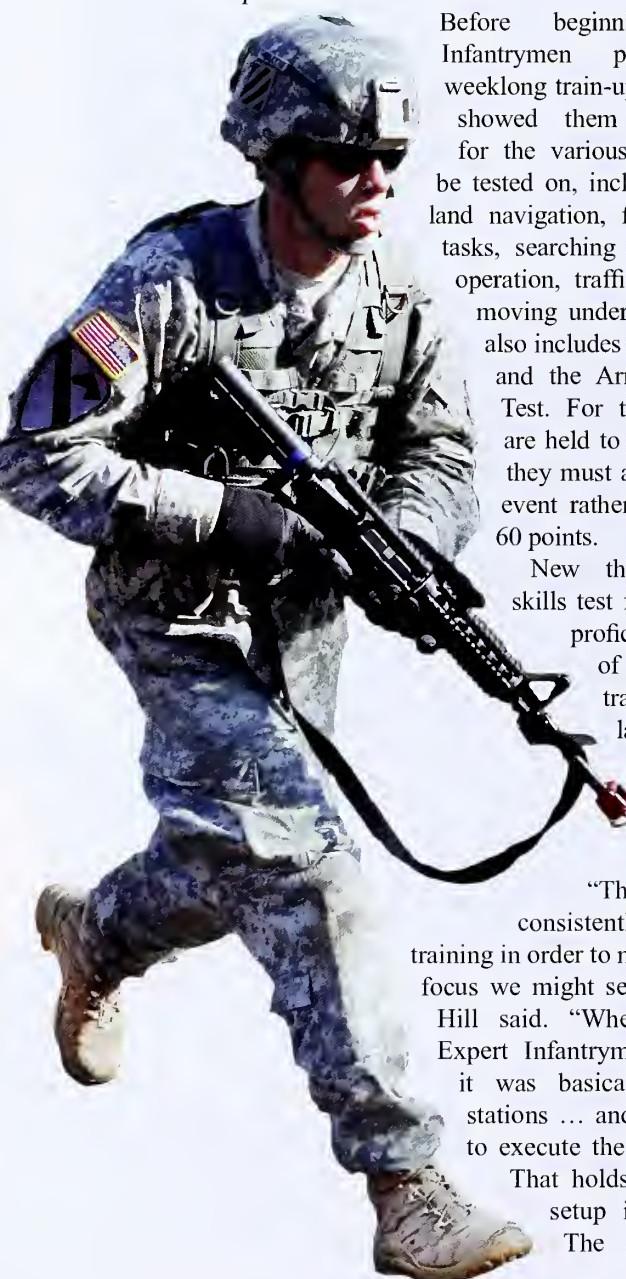
Photos by Ashley Cross

At top, SGT Michael Lawson from the 2nd Battalion, 69th Armor Regiment trains on an M136 rocket launcher.
Above, SPC David Gray from the 1st Battalion, 15th Infantry Regiment high crawls to get into position during a practice run of the EIB's patrol lane on 13 March.
At left, SPC Ryan Gillaspy from the 4th Ranger Training Brigade prepares to load a .50 caliber machine gun at the traffic control point lane of the EIB training on 13 March.

PATROL PLANNING IN AN IED ENVIRONMENT

LTC HAIMES A. KILGORE
CLIFF REPICKY

A patrol leader, whether mounted in a combat platform or making his way on foot, has always applied a pre-operational checklist to his actions to help ensure he hasn't forgotten something. Every little detail that can be addressed helps increase the odds of success. After a decade of combat in a variety of environments against a constantly evolving opponent, the patrol leader has developed a keen sense of needs to be addressed before going "outside the wire." The issue in today's battlefield comes from the flood of improvised explosive device (IED)-related enablers and procedures to apply to increase a patrol's security and assist in mission success.

In February 2012, the Maneuver Center of Excellence (MCoE) drafted what is really a two-stage checklist — Stage 1: Checks to be conducted prior to departure and Stage 2: Checks and actions to take during the patrol. These pre-combat checks and operational reminders are not device/"widget" specific, but address capabilities that will support both mounted and dismounted patrol leaders.

These simple checks will help synchronize the many counter-IED (C-IED) enablers available to the warfighter in theater and help address where a new widget fits in the planning process based on its capability.

Pre-Patrol Checks:

1. The element leader conducts a detailed mission analysis for their area of operations (AO) to determine C-IED enabler requirements.

    a. Requests intelligence data on the route and area of operations from the company intelligence support team (CoIST)/S2.

    b. Performs a detailed map and imagery reconnaissance of the route/AO to identify vulnerable points (VPs) and vulnerable areas (VAs), and areas with historical IED employment.

    c. Reviews the most recent pattern analysis for explosive hazards and attack sites to determine the relevancy of named areas of interest (NAIs) and targeted areas of interest (TAIs) to include VAs and VPs.

        I. Identifies locations for placement of crew-served weapons, small kill teams (SKTs), snipers, and both mounted and dismounted optical platforms (ex: Long Range Advanced Scout Surveillance System [LRAS3], Base Expeditionary Targeting and Surveillance Systems–Combined [BETSS-C], Rapid Aerostat Initial Deployment [RAID]) to support maneuver in and around VP/VAs. (Remember to clear support-by-fire (SBF) positions before occupation.)

        II. Identifies likely target reference points (TRPs) to support maneuver in and around VP/VAs while limiting possible civilian casualties (CIVCAS).

        III. Identifies any host nation partnering or expected civilian interaction to develop appropriate "green on blue" prevention measures (ex: Guardian Angels).

    d. Requests an overflight by available air assets to provide daily intelligence updates.

    e. Executes a detailed threat assessment taking into account the enemy intent, enemy capabilities, weather, and location/terrain.

    f. Analyzes all honesty traces from prior patrols in the AO (use in conjunction with Step b).

    g. Identifies the locations of all known minefields in the AO.

2. The element leader selects trained and qualified operators for all C-IED enablers and conducts rehearsals (ensure multiple operators are qualified for each C-IED enabler).

    a. Practices isolation drills for NAIs and TAIs to include VPs/VAs.

    b. Rehearses standard operating procedure (SOP) for safe lane and explosive hazard (EH)-marking techniques. (Ref: Step 3 e).

    c. Rehearses actions for an EH find.

    d. Rehearses actions for an EH detonation.

        I. Casualty extraction

        II. Medical evacuation (MEDEVAC)

        III. CIVCAS

    e. Rehearse "hot swap" routine for battery-powered systems.

Note: *Perform rehearsals in accordance with current tactics, techniques, and procedures (TTPs); SOPs; and rules of engagement (ROE).*

3. The element leader verifies available C-IED equipment is operational; determines power requirements and material load for sustained operations; and identifies potential interoperability conflicts between all employed C-IED enablers and coalition partners.

    a. Identifies battery consumption requirements for your systems (electronic warfare [EW], counter-radio-controlled IED electronic warfare [CREW]) based on anticipated duration of mission.

    b. Identifies battery consumption requirements for handheld detectors (HHDs) based on anticipated usage during the duration of mission.

    c. Identifies additional sustainment needs for canine teams.

    d. Formulates order of movement and standoff requirements (interoperability) for the various HHDs and vehicle-based CREW/EW suites.

e. Ensures adequate safe lane-marking materials are available for all elements.

Checks During Patrol:

1. The element leader employs available aerial intelligence, surveillance, reconnaissance (ISR) capabilities to extend tactical reach, negate the effects of terrain, and identify enemy threats and likely IED engagement areas.

2. The element leader employs mounted and dismounted CREW systems to protect against any radio-controlled IED threat.

a. Leader determines the number of suites required to provide adequate coverage for his entire element.

b. Leaders determine the effects and impacts of vehicle-mounted CREW on any dismounted operations.

3. The element leader employs portable radio direction finders to detect enemy ground-based radio emitters which could indicate the presence of enemy command and control nodes, observation posts, and spotter positions. (Refer to pre-patrol item #3).

4. The element leader employs available off-leash capable explosive detection dogs to provide standoff detection of EH. (Refer to pre-patrol item #3.)

5. The element leader employs available unmanned ground systems (e.g. robotics) to aid in the detection, investigation, interrogation and/or neutralization of EH, IEDs, and IED components.

6. The element leader employs available ground-penetrating radar (GRP), command wire, and high/low metal handheld detection equipment to locate buried EH, IEDs, and IED components.

7. The element leader utilizes visual equipment (sniper optic, vehicle-mounted systems, etc.) to detect, and investigate EH, IEDs, and IED components.

8. The element leader employs explosive linear charges in high-threat EH areas to assist in the location, destruction, or disruption of IEDs and IED components, while staying within the ROE and limiting the effects on civilian routine/infrastructure.

9. If warranted during interactions with the local populace, the element leader will utilize available biometric equipment to enroll or verify an individual's identity in

Photo by LTJG Andrew Carleen, U.S. Navy

Soldiers practice using their CREW devices during an electronic warfare course in Afghanistan.

support of attack the network activities. (Refer to pre-patrol item #1-C-III.)

10. If warranted during interactions with the local populace, the element leader will utilize available trace and/or vapor explosive detection equipment to check personnel for explosive contamination.

11. If bulk fertilizer is encountered during dismounted operations, the element leader will utilize explosive precursor detection kits to determine if the fertilizer is legal to possess and confiscate any illegal fertilizers.

WARNING: At no time will untrained personnel attempt to collect samples of suspected homemade explosives or precursors for testing purposes. Personnel encountering suspected homemade explosives or precursors will immediately back out of the area and call explosive ordnance disposal (EOD).

For more information, contact LTC Haimes A. Kilgore at (706) 545-5989 or haimes.a.kilgore.mil@mail.mil (include "Dismount Checklist" in the subject line of your correspondence.)

LTC Haimes "Andy" Kilgore is deputy of the Training Development Division and the C-IED/Attack the Network (AtN) lead for the Directorate of Training and Doctrine (DOTD) located at the MCoE, Fort Benning, Ga.

Cliff Repicky is a contractor and C-IED analyst/training developer with DOTD, MCoE, Fort Benning.

EFFECTIVELY LEVERAGING THE CHARACTERISTICS OF THE OFFENSE

BATTLE OF FLINT CREEK, 1789

CPT ERICK WAAGE

Raiding, particularly of area targets, though not the decisive operation in the counterinsurgency fight, has been one of the hallmark missions of Infantry and Special Operations Forces in Afghanistan since the war's inception. To be successful, which many were, these raid missions required units and their commanders to expertly synergize the **characteristics of the offense.** If one would refer to the narrative of America's small wars history, one would likely find the thoughtful application of **surprise, concentration, audacity,** and **tempo** as a unifying thread common in successful raids of area targets. An example of such a raid occurred in the rugged forests of trans-Appalachia and was executed by frontiersmen who learned their fieldcraft through high-stakes trial and error — errors which often directly resulted in the deaths of themselves and their kin.

In East Tennessee, the conclusion of the 18th century was marked by a violent struggle between the European-descended Franklinites and the Chickamauga, led by a cadre of Cherokee, Creek, and Shawnee war captains. Generally labeled the Chickamauga Wars, the conflict spanned approximately two decades and resulted in a multitude of campaigns, battles, and skirmishes with much blood and treasure lost on both sides. Despite the intensity of the overarching conflict, few written reports exist of the larger battles. One exception is the Battle of Flint Creek, which took place deep in the mountains of northeast Tennessee and was considered by Franklinites as the bloodiest yet most one-sided American victory of the Chickamauga Wars.

At the base of Flint Mountain in Unicoi County, Tenn., lies a narrow east-west running gulch cascaded by 10-meter high limestone outcroppings to its south and steep undulating hills to its north. As a teenager, I spent many afternoons trekking the terrain of Flint Mountain, gaining great appreciation for the action and leading

Portrait by Washington Bogart Cooper

John Sevier

me to research the battle more in-depth. It is in this holler that Franklinite militia leader John Sevier handily defeated a large Chickamauga contingent composed of Cherokee, Creek, and presumably Shawnee warriors under the leadership of Chief John Watts.[1] The American militia ensured victory at the Battle of Flint Creek by effectively leveraging the **characteristics of the offense** to their favor. Fortunately for the Americans, this decisive Native American defeat blunted the political and military momentum gained from the successes of the Chickamauga 1788 campaign.

The genesis of the Chickamauga Wars was rooted in the adventures of the early long-hunters who ranged the west side of the southern Appalachians during the 1760s. In the following decade, it was these men's reports of the bounty over the mountains that spurred the families of disenfranchised North Carolinians and entrepreneurial Virginians to begin emigrating into what is now East Tennessee.[2] In the early 1770s, the area was relatively unpopulated by Native Americans and was used mainly as both a hunting ground and a buffer zone between the Cherokee and northern tribes.[3] It is in this geopolitical vacuum, where the

"lost" state of Franklin sprang up, that the core of the conflict uncoiled.

Britain established the Proclamation Line of 1763 to protect her Native American neighbors in the continental interior from the encroachment of European settlers — thus mitigating the risk of frontier conflict and trade disruption with the indigenous people. However, due to the remoteness of the border, this protective line was challenging if not untenable for the colonial government to enforce. Beginning in the late 1760s and early 1770s, a slow trickle of settlers began making their way over the mountains into the Holston, Watauga, and Nolichucky river valleys of northeast Tennessee.[4] Over the next decade, as their numbers increased due to their isolation from the colonial government and to provide services and security for themselves, the settlers formed the state of Franklin, which was later claimed by North Carolina.[5] The dominant tribe of that region — the Cherokee — watched through scornful eyes.

The small footprints of the settlements were at first discomfortingly accepted by the Cherokee, who initially ceded areas of land whose ownership was disputed by multiple tribes in hopes that these other contesting tribes would shoulder the burden of attriting the frontiersmen to oblivion.[6] As the settlements became more numerous with little consideration of Cherokee land rights, a schism occurred in Cherokee politics; one faction, known as the Upper Cherokee, continued to accept frontier advances to maintain peace. The other, known as the Chickamauga, designed to conduct total war on the frontiers and drive the settlers both east and north off of Cherokee lands.[7] Chief Dragging Canoe led the Chickamauga, whose cadre included subordinate war captain John Watts.[8] Beginning in the mid-1770s and continuing to the close of the century, Dragging Canoe and his disciples conducted a multitude of campaigns primarily composed of
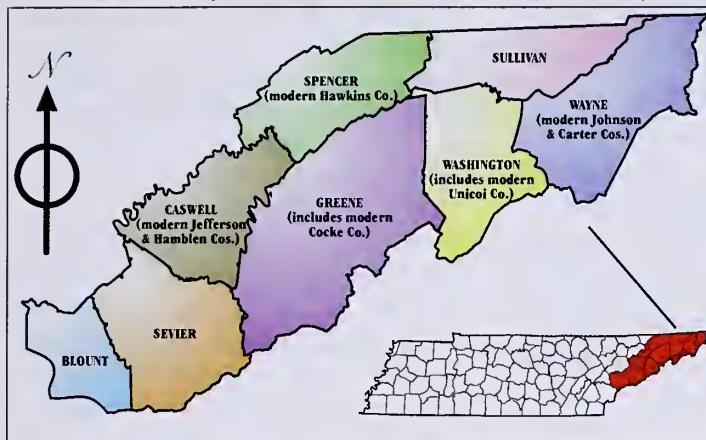
decentralized raids. The Chickamauga Campaign of 1788 consisted of several resounding Native American victories and set the conditions for the Battle of Flint Creek.[9]

As in the decade prior, in the beginning of 1788, the Chickamauga continued to infiltrate into the Franklin settlements from their towns in southeast Tennessee and northern Georgia and attack both soft targets, such as isolated cabins, and hard targets, such as blockhouses, with fair success.[10] However, in midyear due to the murder of a prominent Upper Cherokee chieftain by Franklinites while under a flag of truce, the Cherokee as a whole coalesced politically under Dragging Canoe and his Chickamauga agenda. With this surge of Cherokee popular support, Dragging Canoe cleared a newly formed Franklinite settlement out of the Holston River area and thwarted an offensive campaign by Franklinites to penetrate into the Cherokee country.[11] Additionally, Franklin itself was undergoing tumultuous infighting over whether or not to maintain autonomy from North Carolina or to concede itself under the sovereignty of that state. At the close of 1788, these factors combined led Watts to maintain his base of operations at Flint Creek in the depths of Franklin during the winter. Instead of traveling from their villages more than 100 miles to the south, he concluded that by minimizing the distance his war parties would have to maneuver to their targets, he could more easily maintain operational pressure on the settlements throughout the traditional off-season for fighting.[12] This decision would lead to the Battle of Flint Creek.

Around 9 January 1789, through his scouts and spies, Sevier learned of the establishment and general whereabouts of Watt's winter base at Flint Creek. Based on this intelligence report, he immediately mobilized his element, which was in cantonment about 25 miles southwest of the Chickamauga base. One can infer from Sevier's report that his elements were composed of light cavalry, rangers, and light infantry. Both dismounted and mounted, Sevier's militia moved through "immense quantities of snow and piercing wind" to within one mile of Flint Creek.[13]

From this attack position, the Franklinites were able to identify the exact location of the camp by the smoke from its fires. At this point, Sevier gathered with his detachment commanders and developed a scheme of maneuver for the attack which took the form of a raid. Sevier tasked his "bloody rangers and tomahawk-men" to

establish isolation on the bluffs surrounding the Flint Creek draw.[14] The remainder of Sevier's forces would then clear up the open mouth of the draw, pushing Watts and his Chickamaugas against the rangers and the banks of the surrounding high ground. Once the Franklinites established isolation, Sevier would initiate the assault with his largest casualty-producing weapon, a grasshopper cannon he had towed to the battle that would be emplaced alongside his assault element. Thus, with a course of action approved and orders given, Sevier's maneuver elements initiated movement to their respective positions in preparation for the raid.[15]

With isolation established, the assault force moved to the mouth of the draw while the gun crew successfully emplaced the grasshopper with little or no observation from the Chickamaugas — for most, if not all, the warriors were held up in their winter huts. As planned, the militia initiated the assault with the grasshopper, rousing the enemy from their huts. Confused, the Chickamauga were unable to mount an organized resistance except for an attack on the Franklinite artillery position, which proved to be effective and resulted in the killing of the gun crew. Though disorganized, with the grasshopper gun crew destroyed, the Chickamauga were able to match and out-mass the militia's fires. Sevier quickly analyzed the fires mismatch and "abandoned that mode of attack, trusting the event to the sword and the tomahawk."[16] He ordered his men to close with and destroy the Chickamauga in close-quarters combat.

Leading the assault with a 100-man light cavalry contingent wielding swords, followed by dismounted tomahawk-men, the Franklinites began clearing the Chickamauga camp up the draw. At some point during the clearance of the camp, once the battle had moved to close-quarters combat, the rangers in isolation moved from their positions in a reserve capacity to assist their comrades. Within 30 minutes, the battle had concluded with the surviving enemy withdrawing off the field, leaving 145 dead and scores more wounded. The Franklinite casualties were five dead and 16 wounded.[17] Regrettably, no Chickamauga accounts of the battle to my knowledge have survived. Within 48 hours, Sevier and his victorious Franklinites had withdrawn 25 miles back to his initial cantonment awaiting supplies and suffering "most for want of whiskey."[18] The Franklinites won the Battle of Flint Creek due to their masterful application of the **characteristics of the offense: surprise, concentration, audacity, and tempo**.

Sevier's bold maneuver under tenuous conditions leading up to the battle achieved **surprise** on an enemy unprepared and unable to defend their position effectively. Watts and his men likely believed the risk of attack by the frontiersmen was marginal due to the rugged, isolated placement of their camp, that it was the off-season, and because of the severe cold and snowy conditions. Thus, it is probable they had little or no screening forces or observation posts in place. Conversely, the frontiersmen took advantage of the Chickamauga's misperception by operating in a manner unexpected; Sevier confronted and defeated the enemy by moving through difficult, mountainous terrain enhanced by snow-trodden paths. It was also during a time of year when Franklinite men typically stayed tethered to their homesteads rather than campaigning. These actions set the conditions, which resulted in a surprised enemy shacked up in their huts from the winter chill without a coherent plan for defending their position, paralyzing their

ability to mass combat power and coordinate a counterattack.

To maximize the effects of the short-ranged sabers and tomahawks of his men, Sevier applied **concentration** to his assault element to gain an advantage. During the course of the battle, the Chickamauga were approaching the point of being able to gain the advantage in firepower over the Franklinites. Seeing his own disadvantage in firepower, Sevier chose to change the type of weapon system (from rifle to tomahawk and saber) for engaging the enemy and was forced to close the range with the Chickamauga to apply violence. To enhance the effects of the close-quarters combat, the Franklinites condensed and concentrated their forces with the assault element to include the ascension of their rangers from their blocking positions in the bluffs overhead.

Sevier intrepidly applied deliberate and controlled violence on the Chickamauga without hesitation while assuming calculated risk using a simple plan, thus, achieving **audacity**. Armed with relevant intelligence on the general disposition of the enemy, Sevier's order mobilized his militia as it began its march from its cantonment to the camp of the enemy. Under risk of a meeting engagement in the mountainous terrain and afflictions caused by severe weather, the Franklinites maneuvered to within a mile of Flint Creek and quickly concocted a simple scheme of maneuver that was rapidly executed without pause. Sevier eliminated apprehension and uncertainty from his force by immediately assuming the offense and with a punctual relentlessness found, fixed, and finished Watt's contingent.

With his artillery neutralized and his ball and powder severely degraded by the snow trek, Sevier, fearing a loss in momentum, chose to maintain and increase his tactical **tempo** by closing with the Chickamauga and forcing them to fight hand-to-hand. This prevented them from recovering from the shock of the initial assault through the potential of their superior firepower. As the initial assault began, the surprised Chickamauga were unable to react in-depth, barring the destruction of the Franklinite cannon. Sevier, knowing his most casualty-producing weapon was rendered ineffective and finding the effects of the Chickamauga's fires more potent than his own, made a timely decision to condense and close the enemy within saber and tomahawk range; by doing so, he maintained initiative. Moreover, as the battle became increasingly "general," he maneuvered his isolation force from their overhead positions to concentrate in the assault. As the tactical situation matured, Sevier was able to adjust the Franklinites' engagement techniques and his maneuver elements to sustain his **tempo** and preserve initiative. With his forces concentrated in the assault, Sevier maintained **tempo** and continued to overwhelm the Chickamauga's combat power, leading to their defeat.

Though he had no formal education in the art of war or doctrine, Sevier effectively leveraged the **characteristics of the offense** to the Franklinites' advantage during this specific area target raid. Sevier's mastery of these characteristics was surely learned through trial-and-error experiences on the gritty borderlands of the frontier

> *Sevier's mastery of these characteristics was surely learned through trial-and-error experiences on the gritty borderlands of the frontier and is a testament to their timeless relevance. ...The Battle of Flint Creek is a model vignette of how sound application of surprise, concentration, audacity, and tempo will gain martial advantage over a defensive enemy regardless of the era or epoch.*

and is a testament to their timeless relevance. Historians have done little to no research or analysis into the action, which is unfortunate; the Battle of Flint Creek is a model vignette of how sound application of **surprise, concentration, audacity,** and **tempo** will gain martial advantage over a defensive enemy regardless of the era or epoch.

From the raid on the Abanaki village of St. Francis by Roger's Rangers to the raid on North Vietnam's Son Tay Prison Camp by the Joint Contingency Task Force, the American Infantryman's raiding legacy remains deeply rooted. If and when researched in-depth, these raids, as well as marginally known raids such as the Battle of Flint Creek, often have one common denominator: effective leveraging of the **characteristics of the offense**. In these transitional times, as the Army defines the future narrative of the Infantry Branch, let us not forget that as security strategies change and conflict locales and situations unpredictably vary, the value of the raid and the characteristics that make it so effective remain constant.

Notes

[1] John P. Brown, *Old Frontiers: The Story of the Cherokee Native Americans from the Earliest Times to the Date of Their Removal to the West, 1838* (Kingsport: Southern Publishers, 1938), 270, 297.

[2] Pat Alderman, *The Overmountain Men: Battle of King's Mountain, Cumberland Decade, State of Franklin, Southwest Territory* (Johnson City: The Overmountain Press, 1970), 16-23.

[3] Brown, *Old Frontiers*, 7.

[4] Alderman, *The Overmountain Men*, 12-17.

[5] Ibid, 22.

[6] Brown, *Old Frontiers*, 7.

[7] Ibid, 162-166.

[8] Ibid, 278.

[9] Ibid, 294.

[10] Samuel Cole Williams, *History of the Lost State of Franklin* (Johnson City: The Overmountain Press, 1924), 210-214.

[11] Brown, Old Frontiers, 294.

[12] Ibid, 296-297.

[13] John Sevier, copy of a letter from Governor Sevier to the privy council of the new state of Franklin dated 12 January 1789, *Augusta Chronicle*.

[14] Ibid.

[15] Ibid.

[16] Ibid.

[17] Ibid.

[18] Ibid.

CPT Erick Waage is currently serving as the information operations officer for the 75th Ranger Regiment, Fort Benning, Ga. He previously served as a platoon leader and company executive officer (XO) with 3rd Brigade, 10th Mountain Division at Fort Drum, N.Y., and as an assistant operations officer, platoon leader, and company XO with the 75th Ranger Regiment. CPT Waage is a graduate of the Infantry Basic Officer Leadership Course, Maneuver Captains Career Course, and Information Operations Qualification Course. He has a bachelor's degree in defense and strategic studies from the U.S. Military Academy at West Point, N.Y.

THE PURPLE TEAM:
AERIAL COUNTER-IED, INSURGENT INTERDICTION

CPT MAT KILGORE AND CPT SEAN STAPLER

"Engine power control levers to fly; systems, CDUs and PDUs are all in the normal operating range. ENG RPM 100 percent; fuel 2,300 lbs. Caution advisory is good; avionics is now as required; crew passenger mission equipment check.
"Black 36, you good to go?"
"We are up Bluestar; let's roll."

The feel of the UH-60L helicopter breaking contact with the ground sends a thrill through all the Soldiers and crew members on board. The 11-man team, consisting of one squad of Infantry Soldiers from Task Force (TF) Iron, one interpreter, and two Navy explosive ordnance disposal (EOD) technicians all know that their chain of command has entrusted them to safely execute one of the most dynamic and fluid mission sets of their career — aerial counter-improvised explosive device (IED) and aerial quick reaction force. The mission set was born out of a need to provide better security over the expansive and dynamic environment of Regional Command (RC)-West, Afghanistan.

Throughout Operation Enduring Freedom, air assault operations and air movement tactics have been an important part of counterinsurgency operations. The challenging terrain of Afghanistan as well as the dispersion of maneuver forces has made Army Aviation a valuable resource crucial to movement, maneuver, and sustainment of light Infantry across the battlefield. As NATO maneuver forces withdraw from Afghanistan, it has become more important than ever to combine Army Aviation and Infantry to achieve effects utilizing an economy of force. Recently, the Soldiers of the 2nd Battalion, 108th Infantry's TF Iron; 3rd Battalion, 158th Aviation's TF Storm; and EOD technicians from

Combined Joint Task Force (CJTF) Paladin successfully used air movement and air assault tactics at the patrol level to interdict insurgent activity in the wide expanse of RC-West.

The Problem Set: RC-West and the Ring Road

Physical terrain in Afghanistan covers a large spectrum from mountainous river valleys to wide arid flatlands. The provinces of Baghdis, Herat, Farah, and Ghor in western Afghanistan are a similar microcosm and constitute the same variation. Populous areas are few and far between with minor agricultural collectives filling in a small amount of the gap. Forward operating bases with significant logistical support activities, much like the populous areas, are also scarce. This leaves a challenge for maneuver forces attempting to secure terrain or reach out to Afghan National Security Forces (ANSF) for mentoring missions while still sustaining long-term framework operations. Highway 1 or the "Ring Road" remains a critical artery in western Afghanistan to move troops, supplies, and equipment. The International Security Forces Afghanistan (ISAF) as well as ANSF, civilians, and arguably criminals and insurgents rely upon it as a principal line of communication. The primary concern of TF Iron during this period was a section of this route more than 300 kilometers in length from Herat City to the Nimroz provincial border, a large area to secure with very little combat power and Afghan security force presence.

During the preparation phase for deployment, it became apparent to both TF Storm leadership and the Alpha Company "Blue Stars" that they were going to be asked to cover a massive expanse of terrain with limited aviation assets. The TF would have a relatively small number of assault, heavy lift, and attack assets to cover the entirety of RC-West's area of responsibility (AOR). Due to this constraint, TF Storm began to cross-train mission sets throughout the different airframes. The TF developed a training plan that included the introduction of reconnaissance operations across the UH-60 assault platforms. The thought was to cross-level UH-60s and AH-64s to spread abilities and weapons platforms throughout the RC and to diversify the airframes capabilities. This mission set would be designated as a "purple team" based on the color designation given to attack (red) and assault (blue) airframes. At the same time, the "Blue Stars" conducted situational training exercises for vehicle interdiction training. This training provided air crews with the experience of conducting a dynamic mission set that would require a high level of skill and crew coordination and prepare them for future operations while deployed.

The inclusion of purple teams also facilitated the

A UH60L helicopter inserts ground troops on a small hill top to overwatch friendly convoys moving through a valley in Farah Province, Afghanistan.

Photos courtesy of authors

Two UH-60L aircraft attempt to locate landing zones in Afghanistan's Gulistan River Valley. An AH-64 can be seen providing cover in the far background.

needs of RC-West. At the time, there were many requests for attack assets that were unsupported due to the limited amount of airframes and a lack of "bank time," the cumulative amount of flight time available before the next major maintenance event by aircraft type. This was leaving a limited amount of resources available to dedicate to the security of Highway 1. By cross-leveling attack and assault air frames, TF Storm was able to cover twice as much territory in support of forces on the ground.

While these teams were effective at increasing the coverage for ground forces operating in the area, they still faced some challenges in effectiveness. Visualizing and positively identifying an enemy emplacing an IED or laying a rocket were not always conditions that allowed for release of munitions — depending on the circumstances and location. Most situations required troops on the ground to positively identify a hostile intent or action and direct attack aircraft to fire. This restricted a purple team's ability to release munitions except when in direct support of ground forces or in direct response to enemy fire. Possible enemy encountered enroute to or from an objective had to be referred to ground forces that may or may not be able

to act; this was not an incredibly efficient method when fighting a hard-to-detect enemy with many avenues of escape.

Aerial Operations at the Patrol Level

In order to counter the threats ISAF and ANSF were facing and be as efficient as possible with available rotary and EOD resources, planners and commanders from both Aviation and Infantry task forces designed an aerial patrol to augment TF Storm's purple teams. The design process resulted in an airmobile force (with organic close combat aviation support) that could identify IEDs from the air and then quickly react to secure the site and destroy the device. In addition to Infantry and EOD, additional enabling capabilities included a combat medic, a forward observer trained in joint fires who could control supporting unmanned aerial vehicle (UAV) platforms or fixed-wing aviation support, and an interpreter. These capabilities not only reinforced the effectiveness of the ground force, but increased the team's flexibility to respond to a variety of situations on the ground and in the air.

With the inclusion of a second UH-60, an "indigo team" was created. The

availability of a second assault aircraft increased the size and capability of the ground force from an Infantry squad with enablers to a small platoon with the same enhanced capabilities. Increasing the size of the ground force reduced the risk significantly of operating independently and increased the team's overall range by performing missions without dedicated ground support nearby. Additionally, the flexibility to add machine gun or light mortar teams to the indigo configuration made the team much more flexible and able to handle a wider range of circumstances encountered on patrol. While both these concepts are relatively simple, the execution was something that had not been attempted by either task force before and required a reasonable amount of support from Infantry, Aviation, and EOD communities in order to properly prepare and execute .

With all necessary units committing forces to participation, a refined task organization and concept was put into practice beginning with general air assault refresher training and gaining familiarity between all elements involved. The aircrews, disposal technicians, and ground force all went through classes on the ground followed by multiple aerial situational training exercise lanes covering IED identification, aerial insertion, coverage, and extractions. This allowed all elements involved to go through the "crawl, walk, run" stages of training and quickly become proficient in the mission and gain a level of comfort with each other. Key to this fusion was the ability to execute training missions at real combat speed under actual conditions in sector. The team would respond to an imaginary IED at a predetermined place on the road to rehearse actions on the objective. These training missions were essential in building synchronization between the ground force, the aircraft, and the supporting disposal technicians to ensure efficient and decisive execution during actual missions. When coupled with a regular combined planning process (including operations and intelligence updates) and truncated air mission briefs prior to execution, the system soon became standard procedure and was integrated into the units' normal patrol cycles and mission schedules.

During training and eventual execution of missions, the capabilities of the teams

quickly became evident. Not only was the team incredibly effective at responding to found IEDs and clearing repetitive placement sites, they also proved useful at several tasks including vehicle and personnel interdiction to deny enemy access to key terrain, screening or providing advance guard for convoys, and providing a highly mobile reserve force for current operations. Additionally, they were able to counter indirect fire by patrolling known points of origin during high probability launch times. Specifically, the indigo team's ability to conduct split operations under a single command proved effective in interdicting multiple individuals or vehicles at once. They could also secure an IED site for reduction with one element while interdicting a possible triggerman with the other element.

Limitations were also obvious. The aircrafts station time made maximizing availability through precise planning crucial. Allowing assault aircraft to break station with troops on the ground supported by attack aircraft increased station time significantly and allowed for continued ground operations without considerable increase in the risk to the troops. The normal tactical limits of a small, lightly armed ground force also played a role in the decision to insert ground forces into a particular area. Consideration was given as to whether or not a request for a motorized reserve would be required to accomplish the mission. Any time that a ground quick reaction force was outside a certain response time, the ground force commander and air mission commander had to decide whether the risk to ground troops outweighed the immediacy of the requirement to reduce the IED. This was most prevalent in urban or populous areas where attack aircraft rules of engagement were more restrictive and the ability to withdraw or reinforce troops in contact would be considerably more difficult.

Operation Shrimps Net: Tactical Test of the Aerial Patrol

In July 2012, TF Iron assisted Italian army forces in the retrograde of personnel and equipment from two remote outposts in the Gulistan River Valley, Farah Province, Afghanistan. With support from TF Storm, TF Iron dedicated forces to conduct aerial patrols in support of this retrograde with significant success. The 3rd Platoon, B Company, TF Iron; U.S. Navy EOD technicians from CJTF Paladin; and aircrews from the 3rd Battalion, 158th Aviation, 12th Combat Aviation Brigade, manned indigo and purple teams for over 16 hours a day for nearly 10 straight days. The first patrols, conducted prior to execution of the operation, were tasked with reconnaissance of the river valley. Purple teams returned with significant intelligence on the geography, pattern of life in populous areas, and the trafficability of possible routes. As the movement into the valley to retrograde the Italian bases began, indigo teams acted as an advance guard to interdict insurgents forward of the main body, identify and reduce IEDs already in place, and reinforce any elements that came into contact. On day one of the operation, these teams successfully identified, secured, and reduced two IEDs forward of the main body's arrival, preventing the injury and damage that could have resulted from an enemy detonation. The flexibility of the aircraft and the mobility of dismounted ground forces allowed the teams unrestricted access to the difficult terrain where the IEDs were located.

Throughout the remainder of the operation, these aerial teams found and reduced three more IEDs ahead of the main body in support of forces securing the valley in preparation for withdrawal. Additionally, these teams interdicted moving vehicles and groups of personnel encroaching on the security of the main line of communication and route of advance as well as directed attack helicopter ordnance on an enemy command and control node. These actions kept a well-hidden enemy continuously off balance and under cover, restricting their freedom of movement and ability to command and control insurgent cells in place along the valley. Overall, the mission was a success in large part to the actions of these aerial teams, their incredible capabilities, and their persistent presence on the battlefield.

The Way Ahead: A Closer Relationship Between Infantry and Aviation

It is no secret that a combined arms force can bring significantly more to any operation than combat arms operating separately. Airmobile and air assault tactics are regularly used in support of operations to achieve surprise and audacity, as well as increase a commander's reach on the battlefield. Likewise, using these tactics in day-to-day counterinsurgency patrols can be a powerful weapon against a fluid and flexible enemy. Making utility and attack aviation forces available at the battalion task-force level on a regular basis in both training and deployment can ensure an effective and lethal team develops that can respond to a variety of threats.

In training, utility aviation and Infantry should be closely linked to ensure a comfortable relationship with each other in combat. Making aerial and air assault tactics part of a regular training plan with support from higher level commanders that control these assets is essential to building a properly prepared force in both communities. An Infantry force that continues to develop these skills and can understand the capabilities of aviation will enable maneuver commanders to better utilize this valuable asset in the overall maneuver plan. Likewise, aviators who continue to train with Infantry increase their skill set and learn the needs of the maneuver commanders that they may be asked to support. An increasingly paralleled training relationship is, in short, mutually beneficial to both communities as well as incredibly valuable to the operational units that these teams ultimately benefit.

CPT Mat Kilgore is currently servings as the assistant S3 and battalion training officer (Active Guard Reserve), 1st Battalion, 69th Infantry Regiment, 27th Infantry Brigade Combat Team, New York Army National Guard. His previous assignments include serving as a platoon leader with A Company and D Company, 3rd Battalion, 187th Infantry, 3rd Brigade Combat Team, 101st Airborne Division, Fort Campbell, Ky.; executive officer with HHC, 3-187 IN; information operations officer, G7, Headquarters, 1st Cavalry Division; commander of C Company, 1-69 IN, Camp Smith, N.Y.; and commander of B Company, 2nd Battalion, 108th Infantry, Morrisonville, N.Y. CPT Kilgore is a 2002 graduate of the U.S. Military Academy at West Point, N.Y.

CPT Sean J.R. Stapler is currently serving as commander of A Company, 3rd Battalion, 158th Assault Helicopter Battalion, Katterbach, Germany. He deployed as part of Task Force Storm to Shindanad, Afghanistan, and was in charge of 10 UH60L helicopters, four CH47F helicopters, and 75 Soldiers. He has also completed two other deployments to Afghanistan as part of the 82nd Combat Aviation Brigade out of Fort Bragg, N.C. One deployment was as a platoon leader in A Company, 2nd Battalion, 82nd CAB in 2007 in RC South (Kandahar) and East (Jalalabad), and the other was as an assistant S3 in 2-82 in RC South (Zabul Province) in 2009.

EVOLUTION OF WARFIGHTER HYDRATION

JOHN R. KENNEDY
JEFFREY S. PACUSKA

You may talk o'gin and beer
When you're quartered safe out 'ere,
An' you're sent to penny-fights an' Aldershot it;
But when it comes to slaughter
You will do your work on water,
An' you'll lick the bloomin' boots of 'im that's got it.

— **Rudyard Kipling**
Gunga Din, 1-6, 1892

The Current Status of Warfighter Hydration

Water is the largest chemical component in the human body. It accounts for about 60 percent of the body weight. Relatively small changes in the hydration status can significantly impair a warfighter's mission performance. More severe levels of dehydration can result in heat casualties and a subsequent reduction in unit effectiveness. Maintaining adequate hydration is of critical importance.

For centuries, warfighters have used canteens to carry their water and remain hydrated. Other than the shape and material used to construct them, the essential design of canteens used by U.S. warfighters has changed little since the Revolutionary War (see Figure 1).[1] These, in turn, were probably not all that much different from the canteens used by Greek soldiers during the Peloponnesian War (431-404 BC). A canteen is essentially a water bottle that could hold around a quart of water with a stopper or screw cap to keep the water from spilling out when the Soldier was not taking a drink. Could anyone improve on a design that has essentially been around for millennia? The answer is "yes."

Personal hydration systems have been available in the commercial outdoors market for at least 20 years and have been standard issue as part of the Soldier's and Marine's load-bearing equipment for much of the past decade. They represent a major improvement in warfighter maneuverability, hydration, and provide a multitude of advantages over the traditional canteens. Hydration systems are generally easier to carry. Instead of hanging on a belt or occupying much needed space on the front of the Improved Outer Tactical Vest (IOTV) (or other vest), they can be carried on the warfighter's back, attached to the rear of the IOTV or integrated into the warfighter's backpack. Personal hydration systems offer the ability to hydrate mostly hands-free by drinking through a tube, eliminating the need to take the canteen from the belt or vest pocket to take a swig of water. Most hydration system models also carry more water than conventional canteens. It is little wonder that hydration systems have become immensely popular with warfighters, especially those engaged in arid environments. Warfighters who are not issued standard Modular Lightweight Load-bearing Equipment (MOLLE) personal hydration system can purchase their own in military clothing sales stores or on the web. Sales have been brisk.

Unfortunately, the standard MOLLE personal hydration systems are not authorized for use in chemical, biological, radiological, and nuclear (CBRN) environments.[2] Until such authorization is granted, the only hydration systems currently authorized for use with the M40/M42 series protective masks are the M1961 canteen with M1 canteen cap (NSN 8465-01-115-0026), the 2-qt water canteen (NSN 8465-01-118-8173), and the M1 canteen cap (NSN 8465-00-930-2077). The M1961 canteen with M1 canteen cap is an additional authorized list (AAL) item for the M40/M42 series masks. The new Joint Service General Purpose Mask (JSGPM) series (M50/M51/M52) has a different external drink tube connector than the M40/M42 series masks and uses a different canteen cap (NSN 8465-01-529-9800) which is supplied with the masks.[3]

Figure 1 — Examples of Personal Hydration Systems Over the Years

A wood barrel-type canteen with linen sling used in the late 18th and early 19th centuries[4]

M-1961 canteen with type 2 cover[5]

2-quart canteen[6]

MOLLE hydration system[7]

While a new generation of CBRN protective personal hydration systems have been developed by industry and evaluated by the U.S. Army Test and Evaluation Command (ATEC), authorization for use or for fielding cannot be made until the CBRN protective MOLLE personal hydration systems have undergone type-classification. This official process confirms that the systems have undergone rigorous testing to ensure that they will actually seal out CBRN agents, will not allow chemical agent penetration, and are truly safe to use in a CBRN environment. Various manufacturers of personal hydration systems may state that their products can be used in CBRN environments; however, this is not the case. Unless the hydration system has been issued through normal sources, it should not be used with the protective masks or in a CBRN environment. Currently, only the M1961 canteen or the 2-qt canteen is approved for use in CBRN environments, and only these systems will be issued. Just because an item being marketed on the Internet uses terms such as "chem-bio defense," "CBRN tested," or some similar terms does not mean that they will actually provide protection in a CBRN environment.

Bringing Warfighter Hydration to the 21st Century

These are the facts:

* Hydration is super critical for the warfighter. Failure to keep properly hydrated could have catastrophic consequences.

* The canteens that are available to the warfighter and are approved for use in CBRN environments are little changed from the canteens that were used thousands of years ago.

* Personal hydration systems are available that are a major improvement over the conventional canteen. These systems increase mobility and warfighter effectiveness.

* American warfighters have enthusiastically endorsed these systems.

* Currently issued and commercially available MOLLE hydration systems are not approved for use in CBRN environments

Photo by SGT Erica Knight

A South Carolina Army National Guard Soldier drinks water through his protective mask during a decontamination exercise in Varnville, S.C., on 19 May 2013.

and are not authorized for use where there is a potential CBRN threat.

The benefits of using a personal hydration system include:
- Hands-free drinking.
- Frees up space in load-bearing pouches and on the front of the tactical vest.
- Greater water capacity.
- Increased comfort.
- Ergonomically more efficient.

The benefits of authorizing a CBRN hardened MOLLE personal hydration system are:
- Increases warfighter hydration and effectiveness while in mission-oriented protective posture (MOPP).
- Decreases the chances for cross-contamination that occur while hydrating with the canteen in MOPP.
- Less distraction from the warfighter's mission tasks.

A strong indicator that it is worth approving a CBRN hardened MOLLE personal hydration system is that warfighters in the field already accept and use standard hydration systems on a routine basis. An even stronger indicator is that they are investing their own funds to buy unauthorized commercial "CBRN hydration systems."

Notes

[1] "U.S. Army Field Mess Gear," U.S. Center for Military History, http://www.history.army.mil/html/museums/messkits/Field_Mess_Gear.pdf.

[2] "No Unauthorized Hydration Please," *PS, The Preventive Maintenance Monthly*, January 2012, 41.

[3] Ibid.

[4] "U.S. Army Field Mess Gear."

[5] Ibid.

[6] Ibid.

[7] Program Executive Office Soldier photo.

John R. Kennedy, Ph.D., is a retired lieutenant colonel in the U.S. Army Reserve and a physical scientist at the Edgewood Chemical Biological Center, Aberdeen Proving Ground, Md. He holds a bachelor's degree in chemistry from New Mexico State University, a master's degree in physical chemistry from Texas Tech University, and a Ph.D. in physical chemistry from Texas A&M University. He is a graduate of the U.S. Army Command and General Staff College and the United States Naval War College's College of Naval Command and Staff.

Jeffrey S. Pacuska is a chemical engineer and the integrated protection area manager for Army TeCD 1b: Force Protection - Soldier & Small Unit, at U.S. Army Natick Research, Development, and Engineering Center.

EGYPTIAN GENERAL MOHAMED FAWZI

PART VI: PLANS TO REBUILD EGYPTIAN ARMED FORCES AFTER THE SIX-DAY WAR

CDR YOUSSEF ABOUL-ENEIN, U.S. NAVY

After the stunning defeat of the Egyptian armed forces by the Israelis in the 1967 Six-Day War, Egypt's leadership had to assess how best to reorganize and strengthen their armed forces. For the first time, the perspective of Egyptian military planners is made available to U.S. military readers through CDR Aboul-Enein's exposition of the memoirs of War Minister General Mohamed Fawzi. The first order of business after the 1967 defeat was to designate someone as commander-in-chief of Egypt's armed forces, to which Egyptian leader Gamal Abdel-Nasser appointed Fawzi. In turn, Fawzi had to make necessary and vital decisions regarding the manner in which to rebuild the shattered forces. His memoirs offer deep insight into how Fawzi and Nasser assigned other command positions within Egypt's military. Readers will understand how the two developed an ordered summation of political and military tasks. It was also necessary for the two men to organize other rankings of the armed forces and to name commanders of the various military units.

Ultimately, Fawzi's and Nasser's rebuilding of the Egyptian armed forces, and the directives that went along with its rebuilding, would set the stage for the War of Attrition, which lasted, as Fawzi recounts, from 1967-1970. While preparing for this next phase of the Arab-Israeli conflict, it was necessary for Nasser and Fawzi to gather up aid and assistance from its allies, particularly the Soviet Union. Through his translation and analysis of Fawzi's memoirs, CDR Aboul-Enein illuminates the robust scale of support that the Soviets provided Egypt after the Six-Day War. After securing military support in the form of essential military equipment, Fawzi's next task was to combine the posts of war minister and commander-in-chief into a single position. This move would become a permanent fixture in Egypt's leadership to this day.

Having had the great privilege of serving as a journal editor at the Naval Postgraduate School and as author of numerous books on American national security and strategic thought, I understand the need to foster greater empathy and understanding, and to thus better advise our leaders. CDR Aboul-Enein has written several important articles for our journal, and he has brought to those writings the very same depth of insight that we find here, derived from his deep understanding of the region. Today, he shares his sources of information with a wider U.S. military audience, in an attempt to educate future leaders within the U.S. armed forces.

— **Barry Scott Zellen**
Editor-in-chief of *The Culture and Conflict Review* and author of *State of Doom: Bernard Brodie, the Bomb, and the Birth of the Bipolar World*; the four-volume series *The Realist Tradition in International Relations: Foundations of Western Order*, and *The Art of War in an Asymmetric World: Strategy for the Post-Cold War Era*

On the evening of 9 June 1967 and through the morning of 10 June, General Mohamed Fawzi sat at the command center in Cairo's Nasr City district. He wrote that he was the most senior officer in the building amidst a military command structure in collapse. Fawzi called this segment of his memoirs "Starting from Zero," in which he recounted the immediate steps he took when granted authority by Nasser to become Egypt's armed forces commander-in-chief.

He saw his immediate tasks as securing the west side of the Suez Canal from further Israeli incursions and getting the army into an orderly withdrawal and demobilization. The latter also meant disarming the returning soldiers and having them report to their respective units. Fawzi assigned the first task to General Saadek Sharaf and the second task to the Military Police Command. Fawzi recounted how the radio was used to issue orders to retreating troops arriving from the Sinai and to guide them to transport depots which would then take them back to their units. A third immediate task was addressing the 9 June arrival of a massive Soviet airlift, which contained a much-needed military resupply of hardware, equipment, and ordnance. This material needed to be off-loaded, stored, and distributed to field units along the west side of the Suez Canal, which Fawzi imagined would be the new defensive line. Airfields needed to be repaired to receive an additional 40 MiG-17 jet fighters from Algeria.

Fawzi relied on many officers who chose to remain at their posts despite the chaos created by the decisive Israeli strike and by the takeover of the Sinai. These men provided Fawzi with a cadre of officers who did not flee in the face of a disintegrating situation. Therefore, he was able to begin to organize the immediate tasks toward stabilizing the Egyptian armed forces. Many of these officers were given orders to form the Suez Canal defensive line using whatever military equipment was necessary. Fawzi wrote that the defensive line was not just necessary for national security reasons but also for the purpose of reassuring the Egyptian public. It was also important to counter Israeli propaganda that claimed Israeli units had crossed the canal and were headed towards Cairo. Fawzi described how his thoughts, and thereby assignment of tasks, became clearer with each passing hour, and they revolved around building the defensive line along the entire length of the canal. By 11 June 1967, the Six-Day War ended and a sense of normalcy began to take hold in Egypt's major cities.

Nasser and Fawzi Discuss New Commanders in Chief and Military Directives

Following the war, Fawzi's evenings and early mornings were spent with President Nasser at his private home, where the two discussed assignments for a new chain of command.

Fawzi recommended Aswan governor and former air force pilot Madkoor Aboul-Eez as Egyptian air force (EAF) commander in chief. He also recommended Egyptian General Abdel-Moneim Riad, an air defense officer, as armed forces chief of staff. Nasser and Fawzi discussed the composition of the general staff from flag officers to the ranks of major. In addition, after learning how verbal orders in Amer's staff caused confusion and created a chaotic environment, Fawzi created a secretariat for himself to issue formal orders to units in the field. Fawzi recounted that Nasser told him, "This (responsibility of yours) is bitter and hard, and it will need an extra special effort under these circumstances." Fawzi is unique in Egyptian military history as the only flag officer to sit in private with his president to completely and conceptually redesign the armed forces. Fawzi also outlined a series of political-military directives to be taken immediately:

(1) The importance of stabilizing the armed forces and having them focused on a defensive line confronting the Israelis. Nasser and Fawzi discussed Israeli broadcasts of Egyptian losses and how they stoked the flames of a nonexistent conspiracy that the Egyptian people would rise up and topple Nasser. These broadcasts also alleged that the public was demanding a cease-fire with Israel and that Israeli Defense Minister Moshe Dayan was dictating terms to Nasser by telephone. Fawzi asserted that it was vital to prevent Israel from gaining politically from these military successes. It was likely at this juncture that Nasser made the momentous decision to take responsibility for the crushing defeat and offer to step down in a televised broadcast. This would have domestic and regional repercussions, which will be discussed later.

(2) Nasser wanted to bind the Egyptian public to the military and decided to exercise his position as president and leader of the Arab Socialist Union to direct military and civilian affairs. He expressed to Fawzi a desire to restructure the armed forces by entirely removing the condition of a state within a state that plagued many Arab armies. One could argue this goal was never fully realized by Egypt, even to this day.

(3) Nasser began to formulate a foreign policy that refused to negotiate with the Israelis until they returned lands taken in the 1967 war and recognized the rights of Palestinians. Nasser realized that he could not confront Israel militarily, but he also wanted to paint a narrative that Egypt did not seek war for its own sake but to take back its land that was taken by force and aggression. Nasser resolved that the Sinai could only be taken back by force and not through negotiation. This meant Fawzi needed to rebuild the armed forces, and while doing so, hostilities along the canal gradually resumed. Nasser and Fawzi were laying the groundwork for what would be the War of Attrition (1967 to 1970). The Soviet Union's weapons, technical support, and diplomatic leverage was needed for the objective of gradual violence along the canal. Nasser announced an Arab policy whereby Egypt would not be the only frontline state to take on the Israelis, but that Arab League members should participate based on their capabilities. This was a calculated move that would pay off for Nasser because by binding

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all Arab states to Egyptian military policy, he would in effect influence the foreign policies of several Arab states, as well as extract economic contributions for Egypt. Fawzi wrote that Nasser made the Soviets a partner in Egypt's failure by arguing that the prestige of Soviet weapons/technology was on the line. It was a reverse psychology gambit to allow unimpeded access to modern arms, trainers, and Soviet technicians. Nasser ordered Fawzi to prove to the Soviets that Egyptian soldiers could quickly grasp the complexity of advanced Soviet weapons so that the Egyptians could justify to Moscow the requests for additional weapons. Perhaps the most contentious discussion between Fawzi and Nasser occurred when Nasser ordered Egyptian forces to be placed under the command of Soviet military trainers. Fawzi wanted the placement of Egyptian forces under Soviet military trainers to be a concession and for the quantities and nature of Soviet weapons to be different from those imported before 1967. This was to placate the grumbling from those being placed under Soviet training command.

Fawzi and Nasser Continue Their Strategic Formulation

Fawzi and Nasser discussed how to transform their defeat into a war of liberation. The two men discussed conceptually how this would be a defensive war to restore Egyptian soil. They wanted to capitalize on the emotion of the Egyptian people and to craft a national narrative that the Sinai could only be liberated through force of arms and not through negotiation. Nasser indicated to Fawzi that Israel understood only force, and the war should comprehensively deny Israel the means to absorb the Sinai into its new borders. The two discussed that Israel required massive amounts of money through grants and loans in order to absorb its gains. Nasser essentially discussed a diplomatic, legal, and economic campaign to make it difficult for Israel to have the means to develop and exploit the Sinai, the Golan, and the West Bank. The two agreed that the war for national liberation would occur between 1970 and 1971, which gave them a four-year timeline to restore the Egyptian armed forces. Fawzi and Nasser stressed to one another that the Israelis would attempt to interfere with rebuilding the armed forces through a variety of means to include undermining morale through propaganda and economic warfare.

Fawzi's First Directive as Armed Forces Commander in Chief

Upon concluding his meetings with Nasser, Fawzi returned to headquarters and drafted his first directive as armed forces commander entitled, "Directive for the Functioning of the Armed Forces." This was an important document as it began the process of shifting the main mission of the Egyptian armed forces from being guardians of the revolution to liberators of occupied lands. While this single directive would align plans for force structure, weapons, and training, what came after those plans were laid was extraordinary. For the first time, military plans were brought

before a higher council of the armed forces for discussion and refinement; no longer would the whims of one leader constitute final military policy. In addition, Fawzi's first directive changed the armed forces' focus from internal security to external security. It is perhaps a unique case study for the complexities of addressing civil-military affairs — one that has stretched over decades and still hasn't been completely resolved in Egypt.

Arab Leaders Offer Military Aid and Strategize with Nasser

During the Six-Day War, Algerian Foreign Minister Abdel-Aziz Bouteflika (currently Algeria's president) arrived in Cairo on 7 June 1967 in the midst of the war. Fawzi was impressed with Bouteflika arriving as hostilities were under way and conveyed the Algerian leader's offer of troops and MiG fighters. Bouteflika left Cairo and took with him on his personal plane 20 Egyptian fighter pilots who were charged with flying the Algerian MiGs back to Egypt as soon as practicable. A

Arab leaders assemble in Cairo in 1968. From left to right are President Houari Boumedienne of Algeria, President Nur al-Din al-Atasi of Syria, President Abd al-Rahman Arif of Iraq, President Gamal Abdel-Nasser of Egypt, and President Ismail al-Azhari of Sudan. According to Fawzi, these leaders coordinated strategy in dealing with Israel's territorial gains in the aftermath of the Six-Day War.

total of 40 Algerian MiG-17Fs would be the first fighters used to defend Egypt after the complete loss of its air force in the 1967 war. On 18 June, Kuwait engineered an Arab Summit to layout the architecture of Arab states condemning Israel with one voice at the U.N. General Assembly. The summit was also to discuss the embargo of petroleum products against the United States, as well as a mass withdrawal of ambassadors. While the oil embargo option was not exercised in the aftermath of the 1967 War, it would be revived in the 1973 Yom-Kippur War.

Jordan's King Hussein arrived on 11 July and engaged in talks with Nasser. The two agreed on a coordinated stance of refusing defeat and affirming the Joint Defense Pact, and developed a unified pan-Arab strategy. Nasser and King Hussein discussed Egypt's increased ties with the Soviet Bloc, due to the United States' biding ties with Israel. They discussed denying Israel a peace deal with Egypt, Jordan, and Syria and thereby causing the Israelis to ignore the Palestinian question. Fawzi recounted that Nasser intended to use the U.N. as a means of gaining time for Egyptian re-armament and tasked Hussein to speak at the U.N. General Assembly with one Arab voice. Jordan was also selected to be the interlocutor between the aggrieved Arab states of Egypt and Syria, and Washington. Fawzi discussed Nasser's meeting with Algeria's leader Houari Boumedienne, Syria's leader Atasi, Iraq's leader Arif, and Sudan's leader Azhari, in Cairo two days later. The leaders coordinated strategy and, more importantly, talking points in briefing Moscow on Egyptian and Syrian needs in restructuring their armed forces.

Soviet Aid to Egypt

In the aftermath of the 1967 Six-Day War, Fawzi discussed the details of the massive Soviet airlift and sealift of military hardware to Egypt. On 9 June, the Soviets provided 31 MiG-21

fighters and 93 MiG-17 fighter jets via Yugoslavia. Antonov-22 cargo planes arrived hourly to Egyptian airfields, and in June ships disgorged military equipment replacements in both the ports of Alexandria in Egypt and Latakia in Syria. Fawzi wrote that 544 cargo sorties and 15 ships delivered 48,000 tons of equipment to the Egyptian military. The USSR did not request compensation for this installment. Warsaw Pact nations Poland, Yugoslavia, and East Germany provided MiG fighters, artillery, air defense systems, communications equipment, and transport trucks. On 16 June, Soviet General Lashnikov arrived to supervise the offload and distribution of equipment to Egyptian units. Soviet Premier Nikolai Podgorny arrived in Cairo on 21 June with Soviet Marshal Matvei Zakharov, the deputy defense minister and former chief of the Soviet military staff. Fawzi wrote that the Soviet military delegation would be immersed in talks with Nasser, Egyptian Vice President Zakariyah Moheiddine, Ali Sabry, and General Riad as well as Fawzi. The meeting concluded with an agreement between Cairo and Moscow to erase all traces of the Israeli occupation of the Sinai. Egypt would be given priority in newly designed Soviet arms.

Zakharov-Fawzi Discussions on Soviet Military Assistance to Egypt

Marshal Zakharov and Fawzi retreated with their staffs to conduct detailed talks on the nature of the mass flooding of Soviet military hardware, the absorption of these weapons by Egyptian combat formations, and the inculcation of Soviet military doctrine among Egyptian forces. Zakharov and Fawzi's delegations spent four hours discussing weapons systems, with Egyptians asking probing questions in an attempt to comprehend Soviet systems. The discussions extracted a concession from the Soviets to treat Egypt like a Warsaw Pact nation in terms of weapons aid and

sales. The two senior delegations also discussed the Canal Zone and the deployment of forces. Talks then turned to agreements to deploy an initial contingent of 1,200 Soviet military advisors and their treatment, authority, and relationship over Egyptian military personnel. Afterward, Nasser and Fawzi met privately to coordinate talking points on extracting Soviet economic aid. Soviet Premier Podgorny departed for Moscow on 24 June, leaving Zakharov to continue advising the Egyptian general staff.

Fawzi wrote that Zakharov concurred that the immediate need was to ensure Egypt's air defenses, with a focus on varying models of surface-to-air missiles (SAMs), radar, and fighter interceptors. Strategically, Fawzi recounted discussions between Nasser and Podgorny. Nasser desired a tangible demonstration of the depth of Soviet support for Egypt. He proposed to the Soviet premier a visit by Soviet warships and the eventual basing of Soviet naval assets in Egypt as a challenge to the U.S. Sixth Fleet, which in Nasser's mind was looked upon as a strategic reserve for Israeli forces. Nasser also used his understanding of the limitations of Soviet jet fighters, as related to Israeli Mirage and Mysterie jets, to argue for Egypt's need to acquire the Soviet Union's newest deep strike fighter-bombers.

Zakharov planned and oversaw some of the fiercest battles against German forces as a subordinate of Marshal Konev in World War II. He also assisted in the planning of the invasion of Manchuria, defeating Japanese forces in World War II. By 1967, he led the Soviet delegation that created the initial defensive line along the Suez Canal with Fawzi. There is no mention in Fawzi's memoirs that he was in the presence of one of the Soviet Union's truly talented World War II commanders.

Zakharov requested a meeting on 29 June with Nasser, informing him via Podgorny that the Politburo approved of all of their discussion points. He also informed Nasser that Egypt would get the newly developed Sukhoi long-range bombers. In addition, the Politburo agreed to provide the newly developed and evolving T-72 main battle tank as well as additional MiG-21 jet fighters. The Politburo, through Podgorny, affirmed its commitment to Egypt's defense. Yugoslav leader Marshal Tito visited Egypt and Syria, where he outlined Soviet diplomatic pressure being exerted on U.S. President Lyndon Johnson. The pressure centered on a fair and just resolution of the conflict in the United Nations. The Yugoslav leader reminded Nasser that they were the frontline nation for Moscow's ability to airlift and send cargo by rail for sealift through Yugoslav ports. When Egypt was at its most vulnerable, Fawzi recounted the efforts by Arab and East Bloc nations that saved the country from immediate catastrophe. Nasser and the Egyptian general staff did not rest until November 1967, when they were assured that the defensive line along the canal was stable. From June to November 1967, Nasser worked 16 to 18 hours a day.

Conclusion

Aside from organizing Soviet military assistance to Egypt, Fawzi and Nasser also had to continue with the restructuring of the Egyptian national security apparatus. Amin Howeidy was appointed as war minister in addition to his duties as director of Egypt's General Intelligence Service (EGIS — Egypt's version of the CIA). He would be the only person in Egypt's modern history to serve as both war minister and EGIS director. On 20 January 1968, Fawzi assumed the war minister portfolio in order to allow Howeidy to focus on intelligence collection, analysis, indication, and warnings. This meant that Fawzi worked as both war minister and commander in chief of the armed forces. These positions remain combined to this day. Combining the two positions was Egypt's way of having civilian cabinet oversight of military affairs. It is unclear if this will change in light of the 2011 revolution in Egypt.

Restructuring Egypt's armed forces, as well as the leadership within it, was an important first step in the country's path toward restoring itself. Fawzi and Nasser's ability to collectively rebuild Egypt's military and gain assistance from the Soviets was an incredible feat. The two men were able to begin the process of removing the humiliating shadow of defeat that had been placed on Egypt during the partial leadership of the mentally unstable Amer. Fawzi and Nasser's accomplishments allowed them to be able to focus on further preparing for the War of Attrition, which would begin in 1967.

CDR Youssef Aboul-Enein is author of *Militant Islamist Ideology: Understanding the Global Threat* and *Iraq in Turmoil: Historical Perspectives of Dr. Ali al-Wardi from the Ottomans to King Feisal* (both published by the Naval Institute Press). CDR Aboul-Enein teaches part time at the Industrial College of the Armed Forces and has a passion for highlighting Arabic work of military significance to America's military readers. He wishes to thank Dorothy Corley for her edits and discussion that enhanced this work. Finally, CDR Aboul-Enein wishes to express his appreciation for the National Defense University Library, John T. Hughes Library, and Blackwell Library at Salisbury University.

SUSTAINMENT SECURITY IN A DATE

CPT ADAM K. GREENE

During a recent decisive action training environment (DATE) combat training center (CTC) rotation, a Stryker brigade combat team (SBCT) Infantry battalion faced unique security challenges when it lacked the organic ability to protect sustainment assets. The SBCT Infantry battalion's modified table of organization and equipment (MTOE) is generally well suited for a more linear battlefield where sustainment elements have limited dedicated security elements; theoretically, sustainment elements are in a secured area behind the forward line of own troops (FLOT). However, the hybrid threat poses a significantly more pervasive threat to sustainment elements, and maneuver leaders must account for this during planning.

The Joint Multinational Readiness Center (JMRC) hosted the rotation, which was the first DATE rotation featuring an SBCT. The maneuver box encompassed more than 2,500 square kilometers of maneuver space and included Grafenwoehr, Hohenfels, and Amberg training areas as well as the German countryside between and around the three training areas. The rotation was designed to prepare SBCTs for future conflicts that resemble the old high intensity conflict (HIC) environment, but it is updated in accordance with current doctrine.

Initially, the SBCT Infantry battalion used dedicated security elements detached from maneuver companies to provide sustainment area security. Over time, the battalion reallocated the security elements back to their parent companies due to attrition of certain maneuver elements. Lacking dedicated security elements and organic protection assets, the sustainment elements had to assume greater risk both during movements and when in static locations. Maneuver leaders must make risk assumption decisions by either pulling combat power away from maneuver elements to secure sustainment assets or by requiring sustainment assets to secure themselves with limited protection assets.

The Transition from Current Conflicts to Decisive Action

Many may argue that recent operations in Iraq and Afghanistan have developed bad habits within the Army such as training to conduct convoys on the roads during the day instead of maneuvering cross-country at night. Conversely, one may argue that current conflicts have led to an explosion in technological and tactical advances. One of the most significant unit challenges in unified land operations (ULO) is having to simultaneously account for a uniformed enemy, an insurgent threat, and criminal activity — known as the hybrid threat — and be able to take action against each threat differently.

One significant lesson learned in an asymmetrical conflict is that there is no secure rear area. Every combat movement,

A convoy of U.S. Army Stryker vehicles with the 2nd Cavalry Regiment is escorted by observer/controller vehicles during a decisive action training environment exercise near Hohenfels, Germany, on 16 October 2012.
Photo by SSG Jose Ibarra

Soldiers with the 2nd Support Troop, 2nd Cavalry Regiment prepare to recover heavy equipment on 17 October 2012 as part of Saber Junction 2012 in Germany.

Photo by Markus Rauchenberger

especially those involving sustainment elements, requires a dedicated security force. As operations in Afghanistan conclude, units must become familiar in conducting operations only with their authorized equipment rather than seemingly endless quantities of theater-provided equipment. According to the SBCT Infantry battalion MTOE, many organic sustainment sections are not authorized crew-served weapons. Also, attached brigade support battalion (BSB) elements — such as the mechanics and support platoon — are authorized a limited number of crew-served weapons. Mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) may require tasking some of the headquarters and headquarters company's (HHC's) security assets to help protect mission command elements, such as the tactical command post (TAC CP) or tactical operations center (TOC). Since sustainment elements organically have limited security assets, commanders have to decide to either remove combat power from forward elements, assuming risk at the forward edge of battle, or provide for minimal security for sustainment assets, making them vulnerable to an enemy attack.

Initial Organization and Situation

During the first phase of the rotation — the brigade's movement to contact — the Stryker Infantry battalion spearheaded the initial attack originating from Grafenwoehr and attacking south to Hohenfels. The battalion conducted a rapid penetration where tempo was the key to success in order to establish a foothold deep in enemy territory and set the conditions for follow-on forces to destroy the enemy. The battalion bypassed enemy positions and obstacles, except for self-propelled artillery, to maintain tempo. This resulted in both conventional enemy forces and insurgent forces staying free to maneuver between the FLOT and friendly sustainment assets, greatly increasing the operational risk of the sustainment elements.

Initially, sustainment assets were divided into three elements: support platoon, combat trains, and field trains. Stryker units do not have organic support platoons or mechanics. However, the brigade attached sustainment assets from the BSB to each of the maneuver battalions so that the battalions had some additional assets to operate far ahead of the BSB. The support platoon owned a dedicated security element of a section of Strykers. The combat trains were controlled by the battalion S4 while the field trains were controlled by the HHC headquarters. The field trains moved with and helped secure the BSB. The combat trains, however, moved close to the FLOT and initially had an attached Stryker section as a security element from a maneuver company. The attrition of the maneuver companies caused leaders to detach the combat trains' security elements back to their parent company to continue the attack.

Security of the Combat Trains

As the combat trains moved, leaders fell back on habits acquired from past deployments to control the convoy of 20-30 large vehicles. One such habit was having a platoon leader control the entire formation even though commanders or more senior leaders were present. The platoon leader of the security section generally led the patrol, but because he was not in charge overall had to yield any decisions to more senior leaders in the formation. The battalion S4 was the officer in charge (OIC), but he was engaged supporting the sustainment of the battalion, preventing him from being effectively involved in maneuvering the trains. The HHC leadership was often present, but they deferred to the S4 for leadership. As a result, no one took overall tactical control of the combat trains. The security element would lead, the long convoy would follow, and the convoy would clog major thoroughfares in the German countryside, especially when the convoy was in search of a suitable static location to establish the combat trains anywhere from 12 to 24 hours. The combat trains did not generally move more than a few miles each time they jumped locations. A quartering party following a solid map reconnaissance could have alleviated the significant security risk of having a convoy of large vehicles bottle-necked in restricted terrain (especially urban areas).

After the security element found a suitable location for the combat trains, leaders implemented only a hasty security plan with no focus on improving their defensive positions. In this situation, leaders of various elements, such as the medics and mechanics, relied solely on an outer perimeter, which was loosely established. They did, however, generally locate static sites in areas that were not easily identifiable by the enemy — often along tertiary routes — and their vehicles were dispersed well enough so that in the event of an indirect fire attack, it was likely

that only one vehicle per attack might be destroyed. The combat trains' leadership should have developed a deliberate security plan to alleviate these issues.

The maneuver leaders must plan for in-depth defense when these sustainment assets are in a static location. During the DATE rotation, the combat trains were a conglomeration of sustainment assets without a unified maneuver commander. Individual elements (mechanics, medics, etc.) conducted priorities of work based off of their individual priorities instead of what was best for the entire group because there was not a deliberate plan or enforced standard operating procedure (SOP). FM 3-21.21, *The Stryker Brigade Combat Team Infantry Battalion*, describes trains' security requirements, which can be used as a starting point for the security of the combat trains. The specific requirements are:

• Establish observation posts and patrols.
• Position weapons (small arms and machine guns) for self-defense.
• Plan mutually supporting positions to dominate likely avenues of approach.
• Prepare a fire plan and make sector sketches.
• Identify sectors of fires.
• Emplace target reference points to control fires and for use of indirect fires.
• Integrate available combat vehicles within the trains into the plan (for example,

vehicles awaiting maintenance or personnel) and adjust the plan when vehicles depart.

• Conduct rehearsals.

In the DATE, with a hybrid threat, a dedicated security element will do little good against a coordinated enemy attack. *The Soldier's Manual of Common Tasks*, STP 21-1, states, "in an operational environment, regardless of job or individual military occupational specialty, each Soldier risks exposure to hostile actions." Many units may train so that the maneuver elements protect sustainment elements so sustainment Soldiers can focus on supporting the battalion. However, in this situation where several different units are working together, all Soldiers have to be prepared to be part of the defense and know what their role is for the defense. Only a deliberate plan will solidify every Soldier's role.

An example of a train's defense plan could include where maneuver elements orient on enemy mounted avenues of approach with their vehicles and use observation posts (OPs) to orient on dismounted avenues of approach. The trains should also establish obstacles and warning devices, such as trip flares, to complement OP positions. This serves as an early warning system and the first line of defense. The OPs may not be able to defend against a direct attack, but they could delay enemy forces and serve as an early warning for the establishment of an inner

perimeter. Doctrinally, the S4 is the OIC of the combat trains, but he has to focus on sustaining the battalion and serve as the alternate battalion TOC. The S4 requires another maneuver leader to have tactical control over the combat trains to establish a unified defense, execute the defense, and coordinate or control a withdrawal if required.

During this DATE rotation, the combat trains never intended to stay in a single location for more than 12 to 24 hours. Ideally, they planned to stay for 12 hours, but the length was usually 24 or more hours. As a result, it was common for leaders to intentionally not execute a deliberate defense, and no effort was made to improve defensive positions after establishment of the static location. Since the battalion's tactical tempo was high, and the enemy threat on the combat trains was also high, a strong security and a deliberate defense should have been a higher priority.

Upon occupation, tactical leaders should begin engagement area development. After emplacing weapon systems and OPs, they must develop individual sector sketches. They can complete vehicle-mounted weapons sector sketches directly into the Force XXI Battle Command Brigade and Below (FBCB2), which then can be sent and compiled by the maneuver leader in charge of combat trains security directly on the S4's FBCB2. This is so he can make proper tactical decisions or delegate that authority as appropriate.

Convoy Security of Sustainment Assets

Initially during the rotation, sustainment assets were operating under a directive where every movement required a dedicated security element. The brigade and battalion treated the non-organic support platoons like specialty platoons, giving them an

A 2nd Cavalry Regiment Soldier provides security during a multinational training exercise in Vilseck, Germany, on 13 October 2012.

Photo by SPC Joshua Edwards

adequate amount of firepower and better leadership because of all the platoons in the battalion, they ended up acting with the most amount of independence. However, there were many times when a convoy needed to originate from the combat trains, the support platoon was not available, and the security element was not present to escort the movement. Once again, this is because over time the security element was pulled away from the combat trains to go back to its parent company. This forced the combat trains to conduct sustainment patrols without a security element despite the persistent insurgent and uniformed enemy threat. One example of the lack of available security assets occurred when the combat trains' CP lost communications with the TOC, and the HHC first sergeant took the initiative to move to the TOC with only himself and a medical evacuation (MEDEVAC) Stryker. Not knowing if the TOC had been overrun, he felt he had little choice in the situation; however, he went to a location with unknown enemy activity and no security.

The first few convoys without security were made with deliberate assumption of risk. In the example above, the TOC was only about a kilometer away, so they were willing to assume the risk of attack due to the short movement. However, over time, the unsecured movements became more frequent and over greater distances, assuming significantly more risk. The combat trains usually felt they had no choice but to conduct these unsecured movements. Fifteen years ago, this might have been the norm due to the risk of an enemy attack being low since the sustainment assets would have been behind fighting elements. However, because of the current enemy situation, this may have been too much risk to assume.

Unit Maintenance Collection Point (UMCP) Operation and Security

Doctrinally, according to FM 3-21.21, the UMCP is supposed to locate itself along a main route between the maneuver elements and the BSB so that the battalion can maintain equipment as far forward as possible. However, the UMCP did not have the ability to secure itself, especially in vulnerable locations like a main route. As a result, the UMCP located itself with the combat trains, which were located away from main routes. This meant increased travel time, decreasing the effectiveness of the UMCP and increasing the likelihood that the combat trains' locations would be compromised because of the additional traffic to the combat trains for maintenance. Additionally, since the combat trains planned to move every 12 hours, the UMCP was reluctant to maintain vehicles on site; they often retrograded vehicles immediately back to the field trains located with the BSB, which ultimately defeated the purpose of the UMCP.

The limited ability of the UMCP to secure itself directly translated into a counterproductive UMCP in that they were fixing rearward instead of forward, especially during the offense. Maneuver leaders have to make another risk decision in enabling the UMCP to secure itself; this requires detaching additional combat power from the front lines or collocating the UMCP with another element for security, which may hinder its ability to perform maintenance. If the UMCP is collocated with the combat trains, then an SOP and decision points must be established as to the level of maintenance that will be performed and what actions the UMCP must take if the combat trains prematurely moves.

Field Trains Security

One battalion's field trains consisted of the HHC headquarters, the company supply sections, the field feeding team (attached from the BSB), mechanics, the prescribed load list (PLL) section, and elements from the S1 and S4 sections. They secured

Photo by SPC Jordan Fuller

Soldiers with Headquarters and Headquarters Troop, 2nd Cavalry Regiment convoy through a German town during a decisive action training environment exercise, Saber Junction 2012, near Amberg, Germany, on 15 October 2012.

themselves within the brigade support area (BSA). Other than occupying guard towers, the field trains did not have a synchronized plan nested with the overall security of the BSA. As a result, the individual battalion's field trains all maintained 360-degree security to include having other friendly elements within the security perimeter's fields of fire. Essentially, multiple elements existed separately in the same location instead of unifying efforts to secure the field trains and BSA.

This result, in part, may be due to the effect that FM 3-21.21 does not adequately address the security of the field trains and their role within the BSA. However, FM 4-90, *Brigade Support Battalion*, does

adequately discuss BSA operations and how the individual battalion field trains nest into the overall security of the BSA. Maneuver leaders, especially those in the HHC headquarters of an SBCT Infantry battalion, must be well versed in their role of securing the BSA so they can effectively secure themselves and the BSA. If an enemy attack on the BSA was successful, the small battalion field trains are especially vulnerable if the security plan is not nested with the higher BSA defense plan.

Rehearsals

The final step in securing trains in accordance with FM 3-21.21 is to conduct rehearsals. A common observation at JMRC is that an operation can still be successful without rehearsals, and therefore, units tend to forgo rehearsals to use the time for execution or other steps in the troop leading procedures (TLPs). The trains consist of several elements that do not generally operate routinely together, especially if the trains have a security element attached from a maneuver company. Conducting limited or no security rehearsals for the sustainment elements greatly increases the tactical risk assumed by leaders. Rehearsals will help unify security efforts, solidify to all Soldiers that they are an active part of the security plan, and expose weaknesses within the plan. It is imperative that leaders plan for and conduct security rehearsals with all sustainment elements.

What is the Fix?

Based on observations, the first step in securing sustainment assets is the development and execution of an effective SOP. As with any plan, METT-TC will drive the execution, but an SOP will establish the foundation of the plan and facilitate concurrent planning. The SOP should establish the baseline operations, such as the quartering and occupation of static trains locations. A factor that could be addressed is the option to maintain tempo by having all trains' elements establish simultaneously or phase the occupation by having one element at a time (aid station, mechanics, supply, etc.) establish sequentially to maximize security. The SOP could identify what the minimum force and security requirements are for both stationary and moving sustainment elements. For example, if the battalion is at

90 percent strength or greater, the security element is one Stryker maneuver section per 10 sustainment vehicles; if the battalion is between 70-89 percent strength, the security element is one Stryker maneuver section per 15 sustainment vehicles; and if the battalion is below 70 percent strength, the trains withdraw to a more secure location to defend themselves without a dedicated security element. The SOP could establish the requirements for when the UMCP should locate along a supply route to be more convenient for the maneuver elements or collocate with the combat trains for added security. The SOP should also address the doctrinal security requirements as listed above and tailor these requirements to work best for the unit and operating environment. The SOP is also a living document that is updated as the unit identifies improvements based on their training.

During the conduct of the military decision-making program (MDMP) and TLPs, maneuver leaders, especially the S4 and HHC commander, should determine how METT-TC affects the security and operation of sustainment assets and include these adjustments to the SOP for specific operations, allocating additional rehearsal time for the adjustment.

After the battalion determines its SOPs and creates a baseline plan during the MDMP and TLPs, the individual sustainment elements can begin refined rehearsals based on the adjusted plan. The SOP should require the rehearsals as early as possible instead of waiting solely for a produced timeline with allocated rehearsal times. Then, the rehearsals on the timeline could be full dress rehearsals, setting the conditions for Soldiers to execute a sustainment battle drill rather than having to be walked through the process over the radio by leaders because the lack of rehearsals did not fully solidify the plan. The final rehearsal should be a full dress rehearsal of resupply operations with the other companies because the larger footprint will create a larger target, especially since the maneuver companies will not have full situational awareness of sustainment operations.

These rehearsals, at a minimum, should include the following:

• Actions on all types of enemy contact, both while moving and stationary, both with and without a dedicated security element.

• Quartering party and static site occupation procedures (including the link-up between the quartering party and main body).

• Collapsing and withdrawal/jumping the trains.

• Consolidation of the UMCP from an independent location to the combat trains.

• Logistics package (LOGPAC) and resupply procedures, both daylight and nighttime under night vision goggles.

• Communication of the primary, alternate, contingency, and emergency plans and actions upon loss of communications.

• The final rehearsal should be a full dress rehearsal of resupply operations with the other companies, because this is a time when units are especially vulnerable.

Conclusion

In a decisive action training environment, the SBCT Infantry battalion had significant challenges in properly securing its sustainment assets with a hybrid threat, limited combat power, asymmetrical operating environment, and no secured rear area. With current force reduction in the U.S. Army, it is not likely the organization of the SBCT will change to add dedicated security elements for sustainment elements. Therefore, maneuver leaders have to incorporate the risk of sustainment exposure to the enemy in planning and SOPs and how to best mitigate the risk. Finally, the security plan must be effectively rehearsed in order to be successful. Due to the limited combat power, these actions will not guarantee success, but they will definitely maximize the likelihood of success of sustainment elements in a DATE.

CPT Adam K. Greene is an Armor officer who currently serves as a maneuver company observer, coach, trainer at the Joint Multinational Readiness Center in Hohenfels, Germany. His previous assignments include serving as commander of A Troop, 3rd Squadron, 73rd Cavalry Regiment, 1st Brigade Combat Team, 82nd Airborne Divison, Fort Bragg, N.C.; executive officer (XO) of C Company, 1st Combined Arms Battalion, 5th BCT (Army Evaluation Task Force), 1st Armored Division, Fort Bliss, Texas; and platoon leader and XO in A Troop, 1st Squadron, 32nd Cavalry Regiment, 1st BCT, 101st Airborne Division, Fort Campbell, Ky. CPT Greene earned a bachelor's degree in chemistry from North Georgia College and State University and a master's in business administration from Grantham University.

MISSION COMMAND STAFF TRAINER

THE ARMY'S PREMIERE MISSION COMMAND SYSTEMS COLLECTIVE TASK TRAINER

GREGORY EDDY

The creation of complicated and often costly simulation programs and special applications normally accompany the introduction of various sophisticated digital Army Battle Command Systems (ABCS). These simulations programs and special applications produce situations/events in units' ABCS boxes which, in turn, stimulate operators/staff reaction. Examples of current simulation programs which support major command post (CP) training exercises are the Corps Battle Simulation (CBS) and the Joint Conflict and Tactical Simulations (JCATS). Though simulation programs like these support unit ABCS individual and collective task refresher and sustainment training, they have a tendency to cause high overhead in internal and external personnel support, extensive lead time for training coordination, cost, and equipment.

History — As a result of unit requests for ABCS stimulation assistance, the National Simulation Center originally developed a low-overhead software application — the Battle Command Staff Trainer (BCST) — which is now called the Mission Command Staff Trainer. The Product Director Common Software (PD CS), under direction of Program Manager Strategic Mission Command (PM SMC), has the responsibility to continue development, fielding, and training of the MCST. TRADOC Capability Manager Mission Command (TCM MC) is responsible for MCST requirements generation and oversight.

What MCST Is and Is Not — MCST is a software training program that operates on standard personal computer systems with Microsoft Windows XP. This program is applicable to both active and Reserve units, Mission Training Complexes (MTC), and Mission Command Centers of Excellence (MC COE). This software application, however, is not a substitute for ABCS or a replacement for CBS, JCATS, or other constructive training simulations. These systems were born of necessity and serve a very useful purpose for larger-scale training exercises.

Uses — MCST enables units to conduct battle staff training with the ABCS using internal resources with minimal setup, time, and effort. MCST facilitates individual and collective staff refresher and sustainment training for staff sections or entire staffs from battalion through Army Service Component Command (ASCC) levels. Significant training opportunities afforded by MCST include: maintain and improve highly perishable AMCS skills, train new staff personnel, apply staff coordination/battle drills, assist in battle rhythm development, and aid in train-up for exercises/events. This software provides an ability to stimulate battle staff reactions to friendly and enemy force events. MCST can be configured to communicate with the training unit's warfighting functions systems and inject friendly/enemy situational awareness data to those systems. It can tailor friendly force structure, roles, names, and icons to the unit that is being trained. Actions from

the MSEL may be scheduled to occur at specific exercise times or manually inserted during the exercise to initiate a staff reaction. MCST must only be used on training networks, never on real-world operational networks. The risk of mixing simulated and real-world operational events is too great.

How Units Receive MCST — Army units/organizations receive MCST new equipment training (NET) through coordination with the PM SMC MCST representative at their unit set fielding conference or unit equipment reset conference. Additionally, MCST software and associated training documentation can be downloaded through the MCST AKO download site at https://www.us.army.mil/suite/kc/10244567. (AKO users will request access to this site from the MCST POCs listed at the end of the article.) The MCST computer program, pre-loaded scenarios, and a reference disk are included in the training package and are utilized by the NET teams during initial training. Another way to receive MCST training is online at https://ctm.gordon.army.mil site. Once logged in, go to "Rich Media Training." You can view the training online or download each training segment to view locally. If downloading, ensure each file is put in its own folder; then unzip each file. Once a training segment (file) is unzipped, click on the "player.html" and the training segment will begin.

New Equipment Training — Units/organizations should have their allocated ABCS equipment and finish ABCS NET before receiving MCST NET. During the MCST NET process, personnel from S3/G3 and S6/G6 sections receive instruction on how to connect the MCST into the ABCS network, operator training, and exercise scenario training. MTCs and MC COE's can receive MCST NET after training dates are established with the PM SMC MCST representative. A tiered support system provides assistance to units that encounter MCST issues. The support system contact information is located in the documentation on the MCST AKO download site.

Summary — Providing tremendous potential for Army battle staffs, MCST provides: a flexible training medium to maintain operator proficiency on their respective ABCS box; flexible training employment; low unit overhead in terms of exercise support personnel, training resources and cost. MCST stimulates the ABCS with situational awareness data and tactical messages that add realism to collective staff training.

Questions and comments may be directed to:

* Wallace Matteson at wallace.e.matteson.ctr@mail.mil or (913) 684-4597

* Gregory Eddy at gregory.j.eddy.ctr@mail.mil or (913) 684-4611.

Once units receive MCST software, familiarize their units with it and use it, send suggested improvements and recommendations for new features to the individuals listed above.

Infantry
Online

Magazine Ceases Printing; Transitions to Web-only Format

After a century of supporting the training and professional development of the Infantry, our branch magazine will cease publication of printed issues and will instead appear solely as a Web-based journal as of the end of Fiscal Year 2013. This was not our choice alone, but instead reflects the economic realities of this time of constrained resources. We are not alone in this transition; Training and Doctrine Command has directed that no more professional bulletins will be printed in FY14, and we are fortunate to have the option to remain viable through our Web presence.

Our new Web portal, *Infantry* Online, is currently under development and will not only include issues of the magazine but also other research and professional development features. We will continue to print articles

on training, doctrine, lessons learned, tactics, weapons, equipment, and professional development as in the past. We will also continue to publish updates on Maneuver Center of Excellence (MCoE) and U.S. Army Infantry School initiatives and priorities along with the Commandant's Note to keep our world-wide readers up to date on our branch.

We are currently archiving all of our back issues, which will be available on a no-charge basis for our readers who wish to use Infantry as a research tool as they have in the past. We will also have a searchable index where viewers can find articles according to topic, keyword, or author.

To facilitate access, we anticipate making new issues of the magazine easier to download and read on mobile devices such as smart phones, tablets, and e-readers.

Infantry will continue to appear on a quarterly basis, four issues per year, with updates posted periodically to ensure currency of subject matter.

Infantry is not "dead;" we will continue to be a prime professional development publication for the Army. It is likely that we will continue to be solely Web-based for the foreseeable future but, should our Army's current budget uncertainty be resolved at some time later, hard copy publication will always be a goal and — hopefully — once again a reality.

For more information, please contact magazine staff at (706) 545-2350 or email usarmy.benning.tradoc.mbx. infantry-magazine@mail.mil

INFANTRY INNOVATIONS IN INSURGENCIES:
SRI LANKA'S EXPERIENCE

LTC (RETIRED) IVAN WELCH

How do you defeat a rebel army? An army that grew from the smallest insurgent cells, using terror as its prime tactic, to a fully manned force with artillery, an air wing, naval units, and elite suicide cadres? How do you remake yourself during a conflict in a way that leads from stalemate to victory? Look to the Infantry.

The Sri Lankan army had just such an experience. They fought for many years against a separatist movement that had evolved into an insurgent state. Facing an impasse on the battlefield, leaders and men rethought their tactics and revived infantry fundamentals.

Background of Conflict: Cycle of Cease-fires

The Eelam War began in 1983 as the long-term tensions between the Singhalese and Tamil populations erupted with riots, killings, and government response. This initial outbreak set the tone for the long bloodletting to come. The first cease-fire between the Sri Lankan government and the Liberation Tamil Tigers of Eelam (LTTE) began in July of 1987 and was followed by the Indian army intervention on the island.

The Indian army fought with the LTTE and established a peacekeeping effort which lasted until the withdrawal of the Indian army three years later in March 1990. Fighting resumed between the LTTE rebels and the government of Sri Lanka in June 1990, marking the beginning of Eelam War II. The Sri Lankan army was locked into positional defense for the next five years of conflict. From these fixed positions, they used conventional formations and tactics, seeking to clear rebel-dominated areas. During this time, the LTTE conducted terror acts and unconventional warfare throughout the island.

International forces and domestic political realities led to another cease-fire in January 1995. It was short lived, however, because of violations of the cease-fire, terror attacks, and changes in political will. This led to Eelam War III in April 1995. For six years, the Sri Lankan armed forces fought to stave off disaster and protect the Sri Lankan people. During large-scale operations, the Sri Lankan army often advanced on narrow fronts to minimize movement and logistic difficulties. This allowed the LTTE to concentrate defenses along a single axis of advance and stop the much larger force.[1] Then, by infiltration and maneuver, the LTTE would strike at weak points along the extended line of advance to great effect.[2]

The LTTE consolidated territory and created a position of strength. International pressure once again led to a cease-fire which lasted five years. This long hiatus allowed the LTTE to transform from an insurgent force to a rebel army. They amassed artillery, created naval and air capabilities, and expanded a land

force replete with dedicated and deadly suicide cadres.[3] Renewed terror attacks, natural disasters, and political changes weakened the cease-fire agreement, and the fourth and final Eelam War began in July 2006. The LTTE was once again poised to "combine guerilla warfare, positional defense, and IEDs (improvised explosive devices) to slow down and inflict heavy casualties by the extensive use of indirect fires."[4] The Sri Lankan army, however, had also been preparing during the cease-fire. Innovations in infantry training, organization, and employment — along with the efforts of all the armed forces — led to the government's final victory in May 2009.

Initial Use of Infantry

The conventional tactics of advancing infantry formations along linear avenues of approach and seeking to penetrate fixed defenses proved to be a meat grinder for the Sri Lankan army. The LTTE used freedom of movement to infiltrate the flanks of these formations and then strike against the column in depth. When the army columns were delayed by IEDs and obstacles, LTTE artillery and mortars were brought to bear with deadly accuracy.[5]

Over the years, this pattern replayed several times as government offenses were stalled by the LTTE and cease-fires were declared. During these lulls, the LTTE was able to rest and refit while strengthening defenses and choosing the next target. It was during this last pause in 2001-2006 that the senior leadership of the Sri Lankan army realized they had to do something different to change the results in the fighting that would inevitably return. In 2001, during the final stage of a failed divisional operation to clear LTTE positions in northern Sri Lanka, heavy battlefield casualties led to a new concept in infantry tactics. The division stalemated and several small units were missing in action. Unexpectedly, three squads of soldiers made it back to friendly lines after traversing miles of guerilla-controlled territory. This led Infantry leaders to conclude that small units of infantry — with the proper training, organization, and equipment — might be effective within the LTTE area.[6] They needed to make changes to avoid the failures of the past, and this could have been the answer.

Analysis of the past combat experiences pointed to the success of the special forces and commandos in disrupting LTTE operations and striking fear into its leadership.[7] These forces were successful in the close battle as well. Over years of brutal fighting, these elite forces had perfected small unit combat deep within LTTE-controlled areas.

These special forces had their beginnings in 1985 in the

Photos courtesy of Sri Lanka Ministry of Defence and Urban Development

Sri Lankan special forces soldiers were experienced in both the conventional and unconventional aspects of infantry warfare.

midst of Eelam War I. A small group of two officers and 38 men conducted operations deep in LTTE-dominated areas. They were known as combat tracker teams. They were created under the guidance of then Major G. Hettiarachchi and Lieutenant A.F. Laphir.[8] In December 1988, the unit was officially designated as 1st Regiment Special Forces and expanded to four squadrons. Over the years, they became a vital force that was relied upon for deep reconnaissance and raiding. By necessity, they had become the force of both first and last resort during the long civil war. On the eve of Eelam War IV, they were experienced in both the conventional and unconventional aspects of infantry warfare.[9] Their hard-won expertise laid a foundation for the building of the new special infantry operations teams (SIOTs). The special forces and commandos provided a template for equipment, training, and tactics for the infantry to build on.

Shift to More Aggressive Leadership

Lieutenant General Sarath Fonseka was promoted in December 2005 to head of the Sri Lankan army. This signaled the political leadership's commitment to more aggressive leadership and dedication to a final victory. Fonseka was known for his focus on results in combat that weakened the LTTE at all levels and built toward further success. He was quoted by V.K. Shashikumar in the July-September 2009 issue of *Indian Defense Review*, speaking about how he selected his commanders:

"I did not select these officers because they are young. But they were appointed as I thought they were the best to command the battle. I went to the lines and picked up the capable people. I had to drop those who had less capacity to lead the battle. Some of them are good for other work like administration activities. Therefore, the good commanders were chosen to command this battle. I thought seniority was immaterial if they could not command the soldiers properly. I restructured the army and changed almost all the aspects of the organization..."

Successful and aggressive brigadiers were given command of new formations trained to close with the enemy and create battlefield advantage by defeating the enemy "at their own game and in their own backyard."[10]

Expansion of Innovation to Infantry

The most innovative aspect of the Sri Lankan army's adjustments after the 2001 to 2006 cease-fire was the organization of 12-man teams within infantry battalions. These acted independently within the four-kilometer frontline zone that marked the limit of these lead elements. Abandoning the traditional practice of a fixed forward line with major units massing against narrow frontages, the infantry battalions were organized into small units to patrol along the forward line of own troops (FLOT) to make contact with the LTTE cadres and press the attack on a broad front. This took away the freedom of movement LTTE elements had enjoyed over the decades of civil war.

Special Infantry Operation Teams
Concept and Training

Many factors contributed to the development and implementation of the SIOT concept. Much credit goes to the Sri Lankan serving officers' ability to be self critical. Long hours of soul searching and sharing the stories of combat failure from the earlier days of the conflict led to "prudent analysis." In recognition of the sacrifice of fallen comrades, officers and men rededicated themselves to the difficult task of combat innovation. They developed a training program that mixed the Sri Lankan infantry's conventional past with the hard-won lessons of years of unconventional warfare. The innovative concept of creating small SIOTs drew from the special forces experience as well as capitalizing on simple villagers' inherent field skills.

The Sri Lankan army lost 6,000 soldiers during Eelam War III, with as much of 90 percent of those casualties being foot soldiers. These losses left the infantry in need of an overall "rejuvenation" due to the need to replace these casualties and the planned expansion of operational forces.[11] During the cease-fire that ended Eelam War III, advanced platoon training began to reestablish morale, unit cohesion, and a baseline of infantry competency across the force.

All the nations of South Asia share the military legacy of the British imperial army. British doctrine and force design permeated the headquarters down through the rank and file. After decades of combat experience, the leaders of the Sri Lankan army had learned the hard lessons of fighting in the jungle. Infantrymen at all levels felt the need to move away from past doctrines and address "a modus operandi suitable to Sri Lankan environment."[12] The transformation to small teams began. The SIOTs concept was implemented from the ground up — not from an institutional base or from the top down.

The training was extensive and lengthy. After completion of the 44-day advanced platoon training course, select soldiers continued with the SIOT course for additional weeks. This took over three months and "included combined arms, joint warfare, and real-life exercises inclusive of close air support."[13]

The SIOTs were spread out through the infantry battalions of the army. Each rifle company had six of these teams that passed on their skills as instructors. Infantry skills were improved in all formations. By 2006, some infantry companies were completely manned by SIOT soldiers.[14] This level of skill allowed the battalion commander to dominate a broad front that extended 4-5 kilometers in depth. "The concept exploited the inherent traits of the

infantrymen born and bred in villages and possessing the same attributes as a guerilla such as familiarity with jungles, robustness to endure hardships, and the free, uncaring attitude of operating independently."[15]

SIOT Training
Equipment

Special forces selected weapons best suited for close combat in the jungles of Sri Lanka. The SIOTs adopted and adapted these choices for their own use. A silenced 9mm MP-5 submachine gun maintains stealth and avoids immediate compromise upon contact. Enemy individuals or small outposts could be killed or suppressed without the noise of conventional infantry weapons. The limitations of the 9mm round meant that this was a specialized weapon. Each SIOT member was trained primarily on the AK-47 variants and the light machine guns of the same caliber (7.62x39mm), as well as the medium PK machine gun (7.62x54mm). RPG-7s were carried for assault and to break contact. Thermobaric and high explosive rounds were routinely carried for greatest effect, and Claymore-type mines were used for protection when stopped and for conducting ambushes.[16]

Commercially available GPS devices assisted with navigation and control of indirect fires. Night vision devices were sought by all the teams but were in short supply. These were especially useful in surveillance and target acquisition.[17]

Experience in Battle

With the focus on highly trained infantry teams, combat became more decentralized. Teams conducted combat operations without officers present. Planning was conducted jointly by officers and men while decisions were made in the field by sergeants. This required initiative by all ranks and led to innovation in tactics and techniques.

During the final Eelam War, there was a marked change in morale and mission focus. "Most of the men and nearly all of the officers in the 55th Division were veterans, many of them with long years of service in the Eelam War. A seasoned force, the Sri Lankan army had gained from their previous experiences. Not only was morale consistently high, the mentality was now very different. Previously hesitant, hidebound, and beleaguered, they were now confident, self-reliant, and resourceful; this was the new Sri Lankan army. It had been a remarkable transformation."[18]

These four-, eight-, and 12-man SIOTs operated across the battalion frontages seeking contact with the enemy.[19] Out to a depth of four kilometers, these independent teams disrupted LTTE reconnaissance, pushed in outposts, and called in fire support against enemy concentrations. This created uncertainty for the LTTE, not knowing from what axis to expect the Sri Lankan army. The jungle was no longer the sole domain of the enemy.

At night, the teams remained well forward as listening posts and conducted ambushes

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along avenues of approach. This helped secure the area of advance and protect the forces in the rear from surprise attack or flanking movements. General Fonseka was quoted as remarking, "Those days (before SIOTs), we always advanced in battalion strength. We would advance for about two kilometers and then wait for artillery support. Now, we got used to going much further forward by ourselves; sometimes we would go out more than eight kilometers in a day, sometimes 12. The enemy didn't know where we would be or what we would do."[20]

SIOTs Zone of Attack

The teams maintained their separate actions for days, carrying their own supplies, establishing caches, and living off the land as much as possible. Night combat also increased. Previously, the Sri Lankan army ceased actions at night. Only Sri Lankan special forces fought day and night. With the advent of the SIOTs, this changed; the LTTE no longer owned the night. Not only did the infantry formations move and fight at night, but they maintained the tempo of attacks over several days, with no fixed number of days or periods of time to limit them. Operational phases became more unconventional and unpredictable, putting the LTTE at further disadvantage.[21]

With so many small units deployed, the lack of communications equipment was a constant problem. Overall situational awareness suffered "and occasionally resulted in fratricide."[22] The teams struggled to master the arts of camouflage and moving undetected while maintaining communication with their parent units and fire support.

Brigadier R.A. Nugera summarized the battlefield experience of the SIOTs at a defense seminar held in 2011.[23] He emphasized their success in operating "on wide fronts, infiltrating, and striking the terrorists from the front and the rear." These small unit operations took time and "lacked momentum in a conventional sense." It required patience to gather the battlefield intelligence needed to dominate. "The LTTE finally lost the contest for the jungles, their critical bases, their social rents, and ability to wage

Sri Lankan soldiers cross a body of water during operations on the Wanni battle front.

classical guerilla warfare," Nugera said. The SIOTs suffered heavy casualties in this aggressive, constant contact endeavor, and this required a steady program of on-the-job training as new infantry soldiers joined the SIOTs already in the field. Nugera explained, "The actions of these teams compelled the LTTE to commit more cadres and reserves to contest the jungles, and this denied them of much needed reserves to counter other security force operations."

As the Sri Lankan infantry took the fight to the LTTE on their own turf, they began to dominate the elements of time and space. They found that most of the LTTE cadres had "very basic training and relied most of the time on familiarity of terrain and freedom of action rather than actual developed skills."[24] The SIOTs proved to be the superior fighters.

Conclusions and Key Lessons Learned

The Sri Lankan army leadership agreed, "The key unit in recent operations has been the special infantry operations team."[25] The success of the SIOTs is most commonly attributed to their endurance, their ability to merge with the landscape, and their ability to develop the combat situation to their advantage and bring the superior firepower of the Sri Lankan forces to bear. "The SIOT was developed as a concept by the infantry to fight and defeat the LTTE in sub-conventional, guerrilla, and counterinsurgency warfare. The concept exploited the inherent nature of the infantryman, born and bred in villages and possessing the same attributes as a guerrilla."[26]

Key lessons learned from this operational experience include the need to conduct "in-stride" training to replace combat losses and not degrade operational capability. Perhaps even more significant was the impact the SIOTs had on the overall Sri Lankan army. This "battle-tested doctrine" was formulated "in real time" and "served as an engine to inspire the infantry."[27]

Created to face the LTTE in the jungles, the SIOTs established new standards for the infantry as a whole:
- Improved tactical intelligence
- Continuous surveillance of the battle area
- Timely and accurate target acquisition
- Reduced casualties through dispersion and stealth
- Reduced civilian casualties by precision in operations

The success of the SIOTs in dominating the near battleground freed the special forces from the close battle and allowed them to be used in their classic role of deep penetration against critical and high-value targets.

Jungle warfare requires small groups that know the jungle and feel at home there. U.S. forces in Vietnam, especially special forces and long-range reconnaissance patrol units, learned these same lessons. Extensive task-focused training is a necessity. Weapons sets must include large-caliber automatics that can defeat the jungle foliage and suppress a close enemy. The expert use of explosives for assault and ambush are needed as well. Most importantly, aggressive leadership is needed at the team and section levels. Without the aggressive corporals, there will be no success. Finally, a level of trust was established amongst the echelons of leadership. Traditional command and control gave way to trusting the team leader with the freedom to accomplish the mission.

As Nugera told the world in 2011, "ultimate success came on the ground by winning the patrol skirmishes. By contesting the LTTE in the dense jungles of the north and the east and by confronting and defeating the deadly suicide cadres... It became the infantry way of war. It resulted in the LTTE being overwhelmed in an expanding torrent of small group operations which they could not match qualitatively or quantitatively and so were defeated."[28]

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[27] Nugera, transcript.

[28] Ibid.

LTC (Retired) Ivan B. Welch, Ph.D., is working with the U.S. Army Training and Doctrine Command (TRADOC)'s Foreign Military Studies Office as a foreign researcher. His interests and focus is on South and Southeast Asia. He served some 27 years in the U.S. Army as an NCO and officer, where he participated in peacekeeping operations, ground combat, coalition warfare, and joint military policy planning. He has served in special operations, airborne Infantry, and armored Cavalry units; and was certified as an Army strategist, Army foreign area officer, and joint staff officer.

TACTICAL PERSONNEL RECOVERY:

BRIDGING THE GAP BETWEEN TTPS AND THE DEDICATED PR STRUCTURE

MAJ NICHOLAS FALCETTO

Leaders, have you ever heard one of your Soldiers say, "The last bullet is for ... me?" Maybe they have a grenade saved for themselves so they "won't be captured alive." Such predetermined behavior is self-defeating and leaves your Soldiers unprepared for the challenges they will encounter should they become isolated personnel (IP) who are "separated from their unit, as an individual or a group" and they "must survive, evade, resist, or escape."[1] This mindset results from a lack of understanding of personnel recovery (PR) throughout much of the Army, outside of Special Operations or Aviation. While current joint PR training programs have roots in the Air Force, operations post-9/11 have demonstrated the need for and development of similar programs in the Army. Unfortunately, in many units PR consists of checking the box on Survival, Evasion, Resistance, and Escape (SERE) training online and completing isolated personnel reports (ISOPREPs) prior to deployment. At the brigade combat team (BCT) level and below, PR is often relegated to the realm of the brigade aviation element, with little awareness among most leaders of the important capabilities available in the Army's PR program.

What is Personnel Recovery?

Army PR is "the sum of military, diplomatic, and civil efforts to affect the recovery and return of U.S. military, (Department of Defense) DOD civilians and DOD contractor personnel... who are isolated personnel in an operational environment," according to Army Regulation (AR) 350-1, *Army Training and Leader Development.* Military efforts begin with education and training such as SERE Level C training, the use of isolated Soldier guidance (ISG) and an evasion plan of action (EPA), as well as the fielding of PR equipment such as the Combat Survivor Evader Locator (CSEL) radio and evasion charts (EVCs). Once isolated, Soldiers return to friendly control through the execution of the five PR tasks — report, locate, support, recover, and reintegrate — which are conducted by IP, units, and personnel recovery coordination cells (PRCC) in accordance with the detailed PR plan within Appendix 2 (Personnel Recovery) to Annex E (Protection).

While you may have never heard of the five PR tasks, developed an EPA, or even seen an EVC, small units in the Army do PR

far better than it initially appears. For example, look at your last land navigation course training. Remember the briefing prior to starting the course where the trainer gave you a panic azimuth and instructions for what to do if you were lost, injured, or ran out of time? That short brief is the application of PR concepts. That trainer just issued ISG! When was the last time you gave a five-point contingency plan? That's right, isolated Soldier guidance once again! ISG provides Soldiers awareness, accountability, rapid reporting, and actions to take when isolated. Consider some basics of patrolling: headcounts, rally points, route planning and checkpoints, battle tracking in the tactical operations center (TOC), and use of tactical standard operating procedures (TACSOPs). All those things help to plan and prepare for isolation and recovery, thus meeting the definition of personnel recovery. The problem is these small unit tactics, techniques, and procedures (TTPs) are often not tied into the larger PR structure. Simply put, there is no linkage between the five-point contingency plan and the five PR tasks. While small unit actions and TTPs resolve many PR events so quickly that no one ever realizes they existed or recognizes them as PR events, there can be a tremendous gap between those small unit TTPs and the dedicated PR structure. That gap endangers Infantrymen working in small units in austere conditions such as snipers, advisors participating in security force assistance missions, or any unit that could have a break in contact during a patrol. Units can close that gap through the tactical application of PR.

The PR Process

Personnel recovery is based on the accomplishment of the five PR tasks: report, locate, support, recover, and reintegrate. Central to PR is accountability of all DOD personnel to include military personnel, government civilians, and contractors. Upon realizing that any personnel may be isolated, the first task is to report through normal operational command channels from the battalion TOC to the brigade personnel recovery officer (PRO) to division and corps PRCCs. Anyone who knows of or suspects a person has become isolated should immediately report the incident. Reports do not have to originate from the isolated person's own unit. Knowledge of the isolating event may come from having witnessed the event,

Students in SERE Level C training at Fort Rucker, Ala., conduct a water crossing.
Photos courtesy of U.S. Army SERE School.

Students at the U.S. Army SERE School learn survival techniques during SERE-C training.

intelligence as well as identify changes that may be required in operational procedures and training programs. The reintegration process is critical to the long-term well-being of the returnee. The overall process is tailored to the experience and condition of the returnee so a short duration isolating event may only require a debriefing at the phase one facility, which is forward located within the theater of operations. On the other hand, someone who encountered a period of captivity or serious injury would need a longer reintegration and go through a phase two facility, such as Landstuhl Regional Medical Center in Germany, before finishing the process at the Army's phase three facility located at Fort Sam Houston, Texas.

be circumstantial such as no communication with a patrol that missed the expected return time, or from intelligence sources. Once reported, the Army, acting as the land component, will employ a variety of assets to validate the isolating event and collect information.

After the report of an isolating event, the first effort is to locate, confirm the identity of, and continue to track the whereabouts of the IP through recovery. Information can come from the IP, observers to the isolating event, and all sources of intelligence. When activated, the PR structure has tremendous capabilities and assets to locate and then support the isolated personnel. Once located, both the IP and his next of kin require support to increase the possibility of a successful recovery. The IP may be supported through efforts to provide needed equipment, establish communications, provide intelligence, or raise morale. Support to the next of kin goes beyond normal casualty assistance and includes, for example, public affairs support to reduce the chance that comments or information made by the next of kin could be used to harm or to exploit the IP.

The U.S government uses military, diplomatic, and civil options to recover isolated personnel. Army doctrine identifies four military methods to execute the recovery task: immediate, deliberate, externally supported, and unassisted. Since the IP's unit often has the best situational awareness, that unit may conduct an immediate recovery before the enemy understands the situation. An immediate recovery requires very little, if any, planning and is the preferred method of recovery. When an immediate recovery fails or is not possible, commanders can plan a deliberate recovery using an established operations planning process. As the land component, the Army is required to conduct its own recovery operations and does so 95 percent of the time; however, if required due to lack of capabilities, there is the option of an externally supported recovery, which utilizes joint, coalition, or host nation assets. Finally, there is unassisted recovery, where the IP returns to friendly control without a formal recovery operation by conducting a successful evasion, which "is normally a contingency used if recovery forces cannot gain access to the isolated individual."[2]

The PR process continues after recovery with the post-isolation reintegration process, which occurs in three phases. The goal of this process is to return isolated personnel to duty with physical and emotional fitness while conducting intelligence and SERE debriefs. These debriefs can provide a tremendous amount of tactical

Linking Unit TTPs to Five PR Tasks

The Army Personnel Recovery Program, established in AR 525-28, is "designed to prevent or reduce any strategic advantage our enemies may gain due to a tactical event involving the isolation of Army personnel" through the "seamless integration of PR policies and doctrine" into Army operations. While PR is a very broad heading, unit commanders can directly link their unit TTPs to the accomplishment of the five PR tasks through the inclusion of ISG and EPA into mission planning. ISG and EPAs synchronize actions between commanders, recovery forces, and IP; this facilitates recovery by giving them expectations of the other's actions.

ISG is the endstate of top-down PR guidance and gives Soldiers the information required to provide awareness, accountability, rapid reporting, and guidance for actions following an isolating event.

At the company and platoon levels, leaders develop ISG based upon PR guidance from higher headquarters and tailor it to the unit's operational environment. While there is not a set format, ISG must provide an easy-to-understand plan of what to do once isolated that is known by all members of a unit. Though lacking the details of a complete ISG, the five-point contingency plan is a simple application of the principles of ISG already in common use at the small unit level:

Where the leader is **Going**

Others he is taking with him

Time he plans to be gone

What to do if the leader does not return in time

Actions by the unit in the event contact is made while the leader is gone.[3]

ISG creates awareness by establishing isolation criteria that address the conditions in which Soldiers should consider themselves isolated. These conditions are easier to define for some types of units than others. For example, when the helicopter is on the ground and can no longer fly, then a pilot is probably wise to consider himself isolated. But for an Infantry unit whose mission is to close with and destroy the enemy, the line between poor tactical situation and isolating event remains murky. Isolation criteria provide clarity to those situations and aid a Soldier in determining when to take action. In general, when a Soldier or group of Soldiers can no longer complete their intended mission and must instead turn their focus on survival or evading capture,

then they should consider themselves isolated.

ISG stresses accountability by clearly outlining the processes and procedures for leaders to account for and track the whereabouts of all Soldiers. ISG should not burden units with additional requirements but rather works best when using TTPs routinely used by the unit such as headcounts prior to movements and daily personnel status reports. Soldiers achieve rapid reporting by having an understanding of what an isolating event is and how it should be reported. An isolated Soldier must take action to effect his own recovery by attempting to contact the unit. Soldiers may use a variety of communication or signaling methods, such as those already included as a part of the primary, alternate, contingency, and emergency (PACE) plans in the unit's SOP. Commonly available methods include VHF/UHF/HF/satellite tactical radios, Blue Force Tracker, VS-17 panels, smoke grenades, star clusters, and strobe lights. While somewhat unknown outside the field of PR, units can get training on the use of personal locator beacons (PLBs) and employment of visual signaling methods to create a ground-to-air signal (GTAS). Regardless of the method, ISG must reflect an understanding of capabilities and raise awareness of all assets available, such as the "sheriff's net," the guard frequency and common traffic advisory frequency (CTAF) monitored by all aircraft, or the emergency beacon on the multiband inter/intra team radio (MBITR), to speed up the report and locate tasks.

ISG must provide simple, easy-to-remember directions that will help "Soldiers feel more confident in difficult situations because they already have a plan" of actions to take.[4] Once again, existing TTPs and SOPs are the best methods to use as ISG since Soldiers are familiar with those methods. The use of rally points, defined in the *Ranger Handbook* as "a place designated by the leader where the unit moves to reassemble and reorganize if it becomes dispersed," is an easy way of providing a plan for actions following isolation. In order to properly use rally points, the handbook states that Soldiers "must know which rally point to move to at each phase … [and]…what actions are required there."

Finally, an isolated Soldier must conduct link-up with friendly forces. The link-up is difficult and dangerous, especially when the recovery element is from a different unit, service, or nation. ISG reduces the danger by establishing protocols such as designated near/far recognition signals known to both the isolated Soldier and the recovery element.

During missions with a greater risk of isolation, Soldiers or units go beyond ISG to develop an EPA. This improves their chances of successful recovery by providing information about their mission and intended actions following an isolating event. Unlike ISG, an EPA is a bottom-up document that is prepared by the Soldier or small unit, then sent up the chain of command to determine the supportability of the plan and for safe-keeping. EPAs are traditionally used by aviators or Special Operations Forces (SOF), but many common Infantry operations have sufficient risk to justify the effort to develop an EPA. Unit size has an inverse relationship to risk of isolation so elements working in a small team such as scouts, snipers, advisor teams, or other fire team to squad-sized missions should be carefully reviewed for risk of isolation. Even larger elements located in a remote patrol base, combat outpost, or joint security station may need to develop an EPA due to their distance from supporting elements.

EPAs should be tailored to each mission and updated when conditions change. The more accurate an EPA is, the better the chance of a recovery. The EPA format will vary based upon guidance from unit and theater PR SOPs, operation orders (OPORDs), and commander's guidance. An example EPA format from Appendix B, FM 3-50.1, *Army Personnel Recovery*, provides a baseline of information contained in an EPA. Much of the information is already available in concepts of operations (CONOPs)/OPORDs, trip tickets manifests, and unit SOPs (e.g. signaling). An EPA consolidates that information, along with integrated specific PR actions, into one document to speed up information flow to a recovery force during the accomplishment of the locate, support, and recovery tasks.

PR Training

As a part of preparation in order to effectively use ISG and EPAs, Soldiers and leaders should have the appropriate level of training. The baseline for PR training is *Army PR (ARPR) 101: Intro to Personnel Recovery Concepts*, which is an AR 350-1 annual

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Example Evasion Plan of Action

1. Identification information includes:
   a. Name, rank, social security number or service number, and duty position of unit members.
   b. Mission number, unit, date, and aircraft, vehicle, or convoy call sign or identifier.
2. Planned route of travel and waypoints information includes:
   a. Direction of travel, route points, distance, and heading.
   b. Evasion plans for each part of the journey or activity.
3. Immediate evasion actions to be taken for the first 48 hours if uninjured include:
   a. Actions for hiding near the aircraft or vehicle.
   b. Rally points.
   c. Travel plans including distance, pace, and time.
   d. Intended actions and length of stay at initial hiding location.
4. Immediate evasion actions to be taken if injured include:
   a. Hiding intentions.
   b. Evasion intentions.
   c. Travel intentions.
   d. Intended actions at hiding locations.
5. Extended evasion actions to be taken after 48 hours include:
   a. Destination (such as recovery area, mountain range, coast, border, or friendly forces location).
   b. Travel routes, plans, and techniques (either written or drawn).
   c. Actions and intentions at potential contact or recovery locations.
   d. Recovery contact point signals, signs, and procedures (written or drawn).
   e. Back-up plans, if any, for the above.
6. Communications and authentication information includes:
   a. Duress word, number, color, or letter of the day, month, or quarter, or other current authentication codes.
   b. Available communications and signaling devices: type and quantity of radios, programmed frequencies, encryption code, quantity of batteries, type and quantity of flares, beacons, mirrors, strobe lights, other.
   c. Primary communication schedule, procedures, and frequencies (initial and extended contact procedures).
   d. Backup communication schedule, procedures, and frequencies.
7. Other useful information includes:
   a. Survival, evasion, resistance, and escape training previously completed.
   b. Weapons and ammunition.
   c. Personal evasion kit items.
   d. Listing of issued signaling, survival, and evasion kit items.
   e. Mission evasion preparation checklist.
   f. Clothing, shoe size, and resupply items.
   g. Signature of reviewing official.
8. Supplementary information includes anything contributing to the location and recovery of isolated persons.

training requirement. Those concepts are further explained in *ARPR 202: Commanders and Staff Responsibilities* and in SERE training. The basis for all SERE training is the Code of Conduct. Established in 1955 by Executive Order 10631 as a response to the conditions encountered by prisoners of war (POW) in Korea, the Code of Conduct provides the framework to guide the actions of all service members who find themselves isolated. In six articles, the Code of Conduct provides basic information and guidance for situations that all Soldiers could encounter. A Soldier's level of training will vary and is commensurate with the risk of isolation, capture, or exploitation, which is spelled out in DOD Instruction (DODI) 1300.21.

SERE Level A (SERE-A) is the "minimum level of understanding for all members of the armed forces,"[5] and is often a combatant command (COCOM) theater entry requirement. The Army's SERE-A program consists of two interactive media instruction (IMI) courses: A*rmy SERE 102: Survival & Evasion Fundamentals Course* and *Army SERE 103: Resistance & Escape Fundamentals Course.* In the short term, Soldiers should complete ARPR 101C in lieu of SERE 103 until the new version of SERE 103 is released. These courses, along with ARPR 101 and ARPR 202, are available on the Army Learning Management System (ALMS), the Army Training Network (ATN), or DVD format from Defense Imagery. Also, the Army Personnel Recovery Proponent Office (PRPO) at the Combined Arms Center offers training support packages (TSP) with PowerPoint slides for unit-level training in place of the ARPR 101, ARPR 202, SERE 102, and SERE 103 IMI courses. In order to conduct SERE-A training, instructors must have completed SERE 102/103 IMI within the past year, completed an Army SERE-C course, and completed either ARPR 202 or the Aviation Mission Survivability Officer (TACOPS) PR course. Contact the PRPO for further information on the TSPs: https://combinedarmscenter.army.mil/mccoe/CDID/PRPO/Pages/default.aspx.

Deploying units often encounter confusion between the Army's SERE-A program, the SERE 100.1 computer-based training (CBT) on Joint Knowledge Online (JKO), and COCOM-specific programs such as the Central Command (CENTCOM) High Risk of Isolation (HRI) Briefing. Prior to a deployment, units should review AR 350-1 and COCOM requirements in order to utilize the appropriate training course.

SERE Level B is for Soldiers with a "moderate risk of capture and exploitation" and expands upon Level A training.[6] The Army has not had a SERE-B capability since the U.S. Army SERE School at Fort Rucker, Ala., became a SERE Level C program in 2007.

Soldiers "whose military jobs, specialties, or assignments entail a significant or high risk of capture and exploitation" require SERE Level C training "at least once in their careers… as soon as they assume duties or responsibilities that make them eligible."[7] AR 350-1 states SERE-C training "should be made available to those individuals whose deployment duties will likely require them to operate outside of secure operating bases with limited security." It further identifies certain Soldiers, as a minimum, who will receive SERE-C training at either the U.S. Army John F. Kennedy Special Warfare Center and School at Fort Bragg, N.C., or at the U.S. Army Aviation Center of Excellence at Fort Rucker. Army SOF will generally attend at Fort Bragg. Personnel eligible to attend at Fort Rucker include snipers, pathfinders, anyone assigned to a reconnaissance squadron, and anyone assigned to a long-range reconnaissance and surveillance unit. Non-Infantry personnel eligible for SERE-C include aviators and enlisted aircrew members,

counterintelligence or human intelligence personnel engaging in collection outside secure bases, and Criminal Investigation Division (CID) agents or Military Police Soldiers conducting investigations outside secure bases. Additionally, AR 350-1 states that any Soldier based upon "assignment, sensitive knowledge, and/or risk of isolation, capture, or exploitation" determined by a brigade commander or higher is eligible to attend SERE-C. For deploying units, combatant command PR guidance will also designate high-risk personnel that must attend SERE-C as a theater-entry requirement. The SERE school at Fort Rucker provides SERE-C training for 2,000 students per year. Information on attending SERE-C is available in AR 350-1, Army Training Requirements and Resource System (ATRRS) course 2C-F107/600-F17(CT), or the U.S. Army SERE School AKO page.

When conducting planning for PR operations (including ISG and EPA development), a key resource is the PRO, who is typically located within the brigade aviation element and, at division and higher headquarters, in the PRCC. Army publications include AR 525-28; FM 3.50-1; FM 3-05.7, *Survival;* and GTA 80-01-003, *Survival, Evasion, and Recovery.* For Forces Command (FORSCOM) units, the FORSCOM PR office is an important resource: https://www.us.army.mil/suite/page/650428. The Joint Personnel Recovery Agency offers country-specific IPG as well as information about PR tools such as blood chits, EVCs, and PLBs on its non-classified and secure websites. While deployed, the PR Special Instructions (SPINS) located in the air tasking order (ATO) provide theater guidance on PR assets, communications, and authentication information. The PR SPINS are available on the secure internet protocol router (SIPR) in the ATO, but it may be easier to get a copy from an Army Aviation unit or your assigned joint terminal attack controller (JTAC).

What we as Infantrymen do as a matter of SOP within our organizations works for our units. But the incompatibility of unit TTPs with the required inputs to the PR system can hinder the activation and utilization of national capabilities in the event one of our Soldiers becomes isolated. By utilizing ISG and developing EPAs, we can link into PR assets and aid in the accomplishment of the five PR tasks. The use of ISG or EPA does not absolve commanders from the responsibility to be prepared to conduct an immediate recovery, which is likely to be the quickest method to return isolated Soldiers to friendly forces. Rather, their usage opens the door to the existing PR architecture, which increases the chances of a successful recovery.

Notes

[1] Joint Publication 3-50, *Personnel Recovery,* January 2007, 274.

[2] FM 3-05.231, *Special Forces Personnel Recovery,* June 2001, 1-13.

[3] Student Handbook 21-76, *Ranger Handbook,* February 2011, 7-4.

[4] FM 3-50.1, *Army Personnel Recovery,* November 2011, 1-11.

[5] DODI 1300.21, January 2001

[6] Ibid.

[7] Ibid.

MAJ Nicholas Falcetto is currently serving at the Personnel Recovery Proponent Office at Fort Leavenworth, Kan. He previously served as the executive officer of the U.S. Army SERE School at Fort Rucker, Ala. Other previous assignments including serving with units in the 82nd Airborne Division and 1st Cavalry Division. He is a 2003 graduate of the U.S. Military Academy at West Point, N.Y., and received a bachelor's degree in mechanical engineering.

DANGER CLOSE:
CALCULATING RISK WITHIN THE 'LAST 100 YARDS'

MAJ MATTHEW R. MYER

Upon entering the National Infantry Museum at Fort Benning, Ga., a patron walks through an exhibit that highlights the "Last 100 Yards" of battle. The exhibit portrays the Infantry's history of fighting an enemy within 100 yards — the most complex area of the battlefield. Clausewitz wrote about the uncertainty of such close combat while Sun Tzu concluded that it is best to subdue the enemy without fighting at all.[1] As young officers and NCOs deduce that battle is uncertain from reading these classics on warfare, we as leaders fail to assert to them that although close combat is predominately uncertain, we must not avoid preparing our units for it.

This avoidance is pronounced in the risk-averse manner in which we train. In combat, our Soldiers are asked to manage the chaos of fighting the enemy within this short range, but our range regulations, live-fire scripts, and range-paddle approach to training convey an unwillingness to prepare them. An area of training pertinent to close combat is the integration of external assets to the direct firefight. External support, such as artillery, close air support (CAS), and rotary-wing close combat attack (CCA), provides the most firepower available to an on-scene commander. Training that restricts employment of "danger-close" fires avoids preparing commanders with our chief advantage in the last 100 yards. This article intends to stir dialogue of our current approach to training on this tactic and proposes an increased depth of analysis of danger-close fire missions beyond our current doctrine that narrowly determines danger close exclusively by weapon, ammunition, and distance.

Failing to prepare our units to utilize fires within close range of our own elements is not new. LTG (Retired) Harold Moore captured a classic example from the Vietnam War in his book *We Were Soldiers ... Once and Young*, which he co-wrote with Joseph L. Galloway. During the Battle of the Ia Drang Valley, CPT Tony Nadal, the Alpha Company commander, requested smoke to obscure the enemy in order for his element to withdraw. With no smoke available, then LTC Moore, based on his Korean War experience, called in white phosphorus rounds within yards of friendly positions. Due to his lack of training, CPT Nadal was initially upset because of the risk he incurred from the fire mission. Despite the perceived danger, however, not one Soldier was hit and the effectiveness of the volley led to the decision to call it again. Moore then did another danger-close mission for his Bravo Company. Moore concluded that the danger-close missions "gave us the edge at precisely the moment we needed it."

Gaining the edge at the right moment is paramount in the risky and uncertain nature of close battle. Managing the battle in these

Two U.S. Air Force joint terminal attack controllers from Pope Field, N.C., look on as an A-10 Thunderbolt II releases its munitions during a close air support training mission at the Nevada Test and Training Range in September 2011.

Photo by TSgt Michael Holzworth, USAF

moments requires realistic training that must go beyond simple statements in doctrine. Army Field Manual (FM) 3-21.10, *The Infantry Rifle Company*, states, "[i]f required, the company commander can even call for artillery fires right on his company position using proximity or time fuses for airbursts." Although our doctrine outlines the idea of using fires danger close to one's own position, it is not adequately trained or thoroughly analyzed in the Army today. Furthermore, joint manuals clearly state that danger-close fire missions are permitted in combat but forbidden in training. Allowing a commander to call fires on his position in combat but not accepting the risks to properly train him to do so seems irresponsible. With a combat-experienced Army and technological advancements in weapons and ammunition, opting for artillery "on my position" is not the most prudent use of fires available to the commander. Excessive restrictions on training danger-close fires is an insufficient approach to properly preparing commanders for this decision, which can be the difference between life and death on the battlefield. These fire missions are more nuanced and complex than the weapon system, ammunition, and distance from friendly forces that determines if a fire mission is danger close.

Before addressing the improper approach to danger-close fire missions, we must first define the term according to doctrinal manuals. Army Techniques Publication (ATP) 3-09.32, *JFIRE: Multi-service Tactics, Techniques, and Procedures for the Joint Application of Firepower*, is a compilation of field manuals from all services that defines danger-close fires in two ways. First, danger close is included in the "method-of-engagement" line of a call-for-fire request to indicate that friendly forces are close to the target. Second, aircraft delivery of ordnance inside 0.1 percent (1 out of 1000) probability of incapacitation (PI) distances are considered danger close. Danger close is a term that is exclusive from risk estimate distance (RED) although the RED for 0.1 percent PI is used to define danger close for aircraft delivery. Danger close is also exclusive from the minimum safe distance (MSD) utilized for peacetime training.

Unfortunately, leaders may approach fire support in combat in the same manner in which the manual does: a simplistic combination of weapon system, ammunition, and distance. This results in a black and white determination of whether a fire mission poses risk to friendly forces or not. Simple approaches to combat situations can be useful, but they often lead us to create simple training focused on risk avoidance, which does not teach young leaders how to mitigate risks in combat. An indication of this tendency comes from the common cliché that we "train as we fight." Yet due to the training restrictions on fires, the difference in distance between training and fighting can be substantial. As small unit leaders and their forward observers stand on the open hilltop of a call-for-fire range and squint through binoculars to see the impact and effect of rounds on targets, we must ask whether this properly prepares them to make decisions concerning complex problems they will face in the last 100 yards.

Analyzing factors beyond those in *JFIRE* helps illustrate how danger-close fires can be delivered safely, with purpose, and in ways that will prevent the enemy from taking away our chief

> *Although our doctrine outlines the idea of using fires danger close to one's own position, it is not adequately trained or thoroughly analyzed in the Army today... Allowing a commander to call fires on his position in combat but not accepting the risks to properly train him to do so seems irresponsible.*

advantage of external firepower assets in close combat. The manual emphasizes the importance of understanding the RED based on the assumptions outlined in the manual, for "any change to these assumptions may significantly increase the risk-estimate distances." Logically, changes in assumptions can also significantly decrease the RED and safely deliver fires danger close. This is important when common enemy tactics are to quickly initiate an attack within close range of our forces.[2] In the enemy's mind, this type of attack levels the battlefield to soldier fighting soldier with rifles and hand grenades because the enemy knows that we often hesitate to drop anything that could also harm our own forces. However, a well-trained combat leader should have the mindset of refusing to cede any advantage to the enemy. The quick and well-calculated decision to deliver fires danger close can turn the tide of battle, often ending a fight on terms favorable to U.S. forces, just as Moore did in the Ia Drang Valley.

Additional Factors for Danger-Close Fire Missions

To bridge the gap between the doctrinal approach to fires and the reality of the danger-close fight, commanders must assess more factors than the employment of the weapon and ammunition. These factors include **terrain, friendly troop disposition, proximity and type of external fires asset, location of civilians, enemy action, commander's calculation of risk, and ultimately the intended effect of the fires.** Doctrinal manuals with extensive tables outlining the RED provide only a starting point to help commanders understand the risks of bringing fires upon the enemy. The complex decision of a danger-close fire mission is simply couched in our doctrine as, "[c]ommanders and fire supporters must carefully weigh the choice…in relation to the risk of fratricide."[3] But how do commanders weigh the choice when the manual approaches this issue in unrealistic ways based on only three factors? How do we train commanders to effectively integrate these additional assessment factors in the close fight when peacetime training policies and regulations restrict the observer of these fire missions to a minimum distance of 1,200 meters from the impact zone?[4] Applying the additional assessment factors to bring external fires closer to the observer will make training more realistic and effective.

Terrain is the first aspect that can change the risks of a fire mission and is a significant factor when delivering ordnance. It is even possible, based on the terrain, that ordnance delivered at a greater distance from a friendly position can be more risky. For example, delivery of a 500-pound bomb within 75 meters of my own position, but at a lower elevation in a river bed, is not as risky as delivering the same bomb at 150 meters at a greater elevation from my own position along the side of a mountain. Terrain changes the risks involved.

Changing the disposition of friendly troops can reduce the risks as well, namely ensuring troops are in covered positions. The *JFIRE* manual bases RED on three assumptions: "friendly troops are standing unprotected in the open, in winter clothing and helmet, and on a line perpendicular to the line of fire." Clearly, combat rarely adheres to these assumptions. Troops are often in

standard protective equipment, in the prone behind cover, and may or may not be perpendicular to the line of fire. When Soldiers are behind considerable cover and wearing ballistic protective equipment, assumptions of danger-close distances can change drastically along with the risks to them.

Another major consideration for friendly forces is the proximity of the external asset. The manuals abstractly approach the weapon and ammunition as a system, but even with the advent of modern technology, a person with a beating heart and a thinking mind is still pulling the trigger. The proximity of that person to the battle is significant, especially when he is delivering ordnance close to Soldiers on the ground. Commanders must understand that calculating the risk of a danger-close joint direct attack munition (JDAM) delivered by a fixed-wing aircraft is much different than danger-close 30mm cannon fire from an Apache helicopter because the pilot provides additional control of the decision, further mitigating risk.

MAJ Bernard Harrington, an AH-64D Apache pilot who served as the operations officer for Task Force Outfront during Operation Enduring Freedom VIII, said, "Our TPMR (technique, pattern, munitions, and range) crew brief is vital to mitigate risk when engaging danger close."[5] In addition to the selected munitions and range of engagements, aviators can apply specific techniques,

Photo by SPC Alexis Harrison

A Soldier with the 4th Squadron, 9th Cavalry Regiment communicates with an AH-64 Apache helicopter as the rest of his squad prepares to rush a simulated enemy stronghold during an exercise on 9 May 2008.

such as diving fire to reduce dispersion and the risk of ricochet, dependent on the terrain. Aviators also select specific flight patterns to orient the aircraft's weapon systems to minimize risks to friendly troops. For example, when Soldiers are danger close, aviators may execute a racetrack pattern parallel to friendly troops to minimize the risk of long or short rounds. Additionally, in today's modern aircraft, aviators can leverage technology, such as moving maps that have the ability to store both friendly and enemy locations in an effort to further reduce risks to friendly troops during a danger-close engagement.

The integration of CCA aircraft, such as the Apache, also provides a marked advantage as the aviators fly within close range of the contact on the ground. Visibility of both the friendly and enemy dispositions allows aviators to more fully develop their situational awareness. MAJ Harrington added, "What we observe on the ground enables us to confirm the location of friendly troops, assess the enemy situation, and ultimately deliver timely and accurate fires. Our ability to develop the situation is critical to mitigating risk."

The proximity of an asset to the battle can also help reduce the risks to civilians. Civilian considerations dictate how the commander can use fires. Significant political effects, both within the host nation country and in the U.S., may determine whether fires can be used at all. In some instances, danger-close fires might be considered reasonable because of the accurate manner in which they are delivered or because of the urgency of the situation. Clearly, a commander willing to deliver external fires close to his own troops has a legitimate need to protect them in this manner. In most instances, commanders using external assets within close range will be acting on more accurate information than when using them from farther away, for the closer the enemy is, the easier it is to identify them and distinguish them from the civilian population. To manage fires close to civilians and civilian structures near the battle, collateral damage estimates (CDEs) are an important tool for balancing political repercussions of considering the safety of your own force over the civilian population or vice versa. Ensuring the safety of your own force is paramount, but the safety of civilians outweighs the destruction of enemy forces. Weighing these factors is difficult because any decision favoring one over the other can have a positive or negative political effect that will affect the strategic environment, depending on the results of the fires. The current information technology environment can magnify these results as the rapid flow of information can quickly create a strategic effect from a tactical battle.

After considering the potential effect of fires on the nearby civilian population, a commander must focus on the enemy because the decision to deliver fires danger close is based on the enemy location. We assume the enemy desires close battle to negate our advantage of external assets, namely aerial and cannon fires. As we engage the enemy at close range, a danger-close fire mission disrupts their decision cycle and can turn the tide of a battle in our favor. Conversely, rigid application of the doctrinal approach allows the enemy to exploit his intended advantage of negating our external assets through close fighting. This situation can often be the decisive point of battle for either side. Furthermore, a commander must make this decision within seconds, so it is essential to prepare him to think through a similar situation prior to the battle. This simple exercise will greatly improve his decision process. The tactics of maneuver warfare suggest forcing the

A 2nd Infantry Division Soldier stands guard as an AH-64 Apache helicopter takes off near Camp Taji, Iraq, in May 2007.

enemy to compromise between the organic fires from the element on the ground and the fires from above. The on-scene commander seeks to force the enemy into a situation in which if they assault forward, they will be killed by direct fire; if they stay in their position, they will be killed by fire from the air; or if they retreat, they will be killed by both. The deliberate decision to deliver danger-close fires ensures the commander retains his firepower advantage over the enemy.

The commander's calculation of risk is key to retaining our advantages in these close contentious battles where Soldiers are aggressively degrading an enemy attack or closing on their positions. The additional factors mentioned previously, in combination with basic metrics, can help leaders make sound decisions in these situations. The important assessment from the commander in calculating risk can be determined by asking a couple of simple questions.

First, are risks to friendly troops from enemy fire greater than the risk of conducting a danger-close fire mission? For example, the 0.1 percent PI outlined in *JFIRE* for 30mm guns from an Apache helicopter is 70 meters, the distance considered danger close. If the enemy is hurling grenades toward friendly troops, a combat leader can quickly estimate the PI for a grenade. Clearly, enemy grenades landing within 10 meters of friendly forces has a greater PI than 1 out of 1,000. Furthermore, the 10 percent PI distance, or 1 out of 10, for 30mm guns from an Apache is 25 meters, which a commander can determine is still a safer probability than the enemy grenades. Therefore, directing the

pilot onto the enemy within these close ranges is a responsible decision.

Some could argue that these two risks will combine to compound the risk further, but assuming this danger-close fire mission will disrupt the risk from enemy fires in exchange for the risk from our own ordnance is a more accurate assessment. Furthermore, calling danger-close fires will reduce the long-term risks since the enemy will likely continue to fight in close range if a commander decides not to use external assets to disrupt them.

A second question the commander must ask is how will this fire mission affect the enemy and can it potentially change the tide of battle? This question ensures the commander identifies and weighs the intended effect of the fire mission. Analysis of the purpose is twofold. First, the purpose of the fire mission is physical, meaning the fires can destroy enemy forces, which in turn will reduce the risks to friendly forces. Second, the purpose of the fire mission is psychological, meaning the fires can disrupt the enemy and change the decision cycle of the enemy commander who may have thought that our force would be unwilling to conduct fire missions that close. The fire mission can communicate to the enemy willingness and competence to bring fires very close, even if it does not physically harm them. The twofold effect of destroying enemy forces and disrupting the enemy decision cycle can turn the tide of the fight or end the battle. Therefore, it is imperative that we effectively train our forces to confidently and competently utilize fires danger close.

Trust Relationships

One way to build confidence to make decisions in close battle is to develop relationships in training that interact in the danger-close fight. Our doctrine emphasizes that full spectrum operations demand "rapid decision making" with "trust and mutual understanding among superiors and subordinates."[6] These trust relationships are amplified in close combat. SSG Ryan Pitts, a forward observer for Chosen Company, 2nd Battalion, 503rd Infantry Regiment, has directed danger-close fire missions during multiple tours in Afghanistan. He said, "Danger-close missions require effective communication and trust between the firing element or CAS platform and the observer."[7] SSG Pitts highlighted one of the relationships based on trust that is built in training and becomes tightly interwoven with other relationships in close combat.

The first interwoven relationship in close combat is between the commander on the ground and the higher commander. One commander is next to the battle and makes decisions under his higher commander's delegated authority. If the commander on the ground, which is the highest-ranking Soldier present, decides he wants danger-close fires, the trust and mutual understanding from the higher commander should unequivocally support this decision. This support should not falter if the results of that decision are not ideal. Key to this trust relationship is "successful shared experiences and training," which is difficult to attain if training does not address the situation occurring in combat.[8] This relationship often begins in training and is more important in combat. During training, both commanders can understand how each sees the battlefield and build a team that supports one another in the risky environment of combat.

The second relationship is between the commander and his subordinates who are fighting the enemy together. If the commander decides to conduct a mission danger close to his own position where his subordinates are also subject to the results of the decision, they may or may not agree with his choice. Trust must fill the gap between the commander's choice and the subordinates' preference. Trust is built in training and experience, but training must subject the commander/subordinate relationship to the realities of risk in combat in order to truly be effective. As the relationship is tested in training, the commander can show competence in accomplishing the mission and genuine concern for his subordinates through sound decision making.

The third relationship is between the commander and the external assets, commonly pilots. The perspective of the pilot or shooter is important to the commander in a danger-close environment. As with many combat relationships, the commander is literally putting his life and the lives of his subordinates in the competent hands of the pilot although the two may have never met nor has the commander personally assessed the abilities of the pilot. As the pilot hammers in rounds danger close to friendly forces, trust and mutual understanding take on a depth and breadth of meaning unmatched in other environments, yet the same pilot in training is restricted to an overly safe distance. Unique to this relationship is the requirement that the on-scene commander transmit his initials in the call for fire, which acknowledges responsibility for the risk associated with the fire mission. This absolves the pilot of the responsibility of the decision when he is following the order from the commander on the ground.

When pilots follow the request for danger-close fires, the supported commander must take responsibility for the risk, otherwise the pilot may hesitate to provide support. Even when a pilot is legally absolved of responsibility when shooting close to friendly troops, he would clearly treat the mission differently than if troops are a safe distance away, but why?

"Obtaining the commander's initials during a danger-close engagement is not only important because it is prescribed by the *JFIRE* manual, but because it indicates that the ground commander has assessed, mitigated, and accepted the risk of the mission," said MAJ Harrington. "However, regardless of the documented procedure, professional aviators mitigate the risk to friendly forces to the greatest extent possible prior to conducting an engagement."

According to Harrington, a pilot's professional responsibility works in tandem with the ground commander's assumed responsibility for the risk, making the passing of initials more a method of communication. Harrington's comments reveal another control factor in assessing risks for danger-close missions. Namely, a commander can assume that a pilot will safely execute his fire mission regardless of how close it is called in, even when he is absolved of the responsibility. This assurance resides in pilot professionalism and the commander-pilot trust relationship built through realistic and often risky training.

Training for the Danger-Close Fight

The nature of the current war in Afghanistan necessitates training focused on the danger-close fight to build trust relationships in our ranks. Many units are organized in small elements such as platoon-sized outposts, Special Forces teams, Afghan army and police outposts, and village stability operations that all assume the risk of facing an enemy with the capability to mass and possibly overwhelm them. Risk aversion, in the form of overly restrictive safety procedures during training for danger-close fires, actually assumes more risk because it avoids the risks instead of training leaders to mitigate the risks. Instead of instilling false confidence by repeatedly telling ourselves we "train as we fight," combat leaders must find a way to thoroughly prepare their subordinates for the reality of close battle.

Leading subordinate commanders, platoon leaders, and NCOs through case studies and shared experiences can greatly increase their preparation. Coupling this with realistic training that incurs some increased risk will pay priceless dividends with the ability to save lives in combat. As stated before, the decision to deliver danger-close fires often occurs within seconds where any hesitation can quickly become a costly delay, multiplying the negative effects of the battle.

To offer another perspective on safety in training, let us look objectively at the PI and MSD for peacetime training. Using the laws of probability, we can look at the alternative side of the PI. For our purposes, we will call it the probability of non-incapacitation (PI'). For the previous example of a GBU-38, *JFIRE* reveals the 0.1 percent PI distance for this bomb is anything 185 meters and closer, which is based on the unrealistic assumptions outlined in the manual. If the PI is 0.1 percent, then the PI' is 99.9 percent that a person at this distance will not be incapacitated. If we change the assumptions and put an observer inside a covered position where he is completely protected, we must assume that the PI' would

be even higher. A reasonable decision would allow an observer in training to call in a GBU-38 within 200 meters of his covered position, but in training we are restricted to the MSD of 1,200 meters.

In order to advocate for strict adherence to the MSD and avoid firing danger close in training, those who are risk averse will argue that close combat is relatively infrequent in modern battle and therefore does not need to be a focal point of training. On the other hand, the high potential of casualties in this situation negates the infrequency of this type of battle. Not only are the stakes high in close combat, its results can quickly have negative operational and strategic effects if high-level staffs are not prepared to properly address the civilian population, the media, adjacent units, and policy makers about the outcome.

Thus far, I have pointed out the irresponsible approaches to preparing units for use of external fires in close combat. While a majority of military units conduct outstanding training that is effective, I do offer a few conclusions that challenge leaders to reassess how they prepare for close combat in terms of managing risk.

First, the safe employment of danger-close fires is feasible in both combat and training. Safe employment of these fires must look beyond the weapon, ammunition, and distance outlined in the manual and view the complete picture of combat including the terrain, friendly forces, proximity of the external asset, enemy actions, civilian considerations, and the intended effect of the fires. Danger-close fires are not a simple weapon and ammunition relationship, but a command decision that weighs many factors.

Second, trust and mutual understanding are built in training, expanded through combat experience, and vitally important to small units engaged in close battle. Commanders must foster this within their own units, with adjacent units, and with their supporting elements.

Third, a risk accepted in training is an effort to reduce a risk occurring in combat. This is the purpose of training, and commanders must view training risks and combat risks over time as well as in singular events. Furthermore, commanders who advocate risk aversion through zero-defect leadership create riskier leaders because they are only trained and rewarded to avoid risk. When these risk-averse leaders are forced to deal with risk in combat, they do not know how to mitigate — a truly risky venture.

Fourth, as chief trainers of our units, we must not primarily envision our training based on restrictions from range-safety regulations. We must first conceptualize our training based on combat, mitigate and accept risk in training as we would in combat, then address range restrictions and prudently modify restrictions as necessary. We often plan our training in the opposite order, losing vital realism and settling for risk avoidance instead of mitigation.

Acceptance of risk must be well understood and supported by all leaders in the chain of command when preparing for combat. These conclusions are an attempt to continue to improve training and to retain the past 10 years of lessons from close combat. During an address to the students at the Naval Postgraduate School on 7 June 2012, Special Operations Commander ADM William McRaven emphasized that military leaders should take and accept risks and be prepared to fail in an effort to learn from experience. Likewise, a responsible venture of all leaders should be to accept risks in training in order to reduce risks in combat.

Notes

[1] Carl Von Clausewitz, *On War*, ed. and trans. by Michael Howard (Princeton, NJ: Princeton University Press, 1976), 85 — "No other human activity is so continuously or universally bound up with that chance." Sun Tzu, *The Art of War*, trans. by Sanuel B. Griffith (London: Oxford University Press, 1963), 78 — "Subduing the enemy without fighting is the acme of skill."

[2] The author's experience of close fighting is based on two major attacks in Nuristan Province, Afghanistan, in August 2007 and July 2008.

[3] *JFIRE: Multi-service Tactics, Techniques, and Procedures for the Joint Application of Firepower*, 106.

[4] This example is the distance based off of MSD of a GBU-38 for peacetime training.

[5] MAJ Bernard Harrington, phone interview, 9 July 2012.

[6] FM 6-0, *Mission Command: Command and Control of Army Forces*, page 1-14, para 1-59.

[7] SSG Ryan Pitts, email interview, 14 June 2012.

[8] FM 6-0, 1-14.

Photo by SPC Ryan Hallock

A forward observer from the 2nd Battalion, 3rd Infantry Regiment, 3rd Stryker Brigade Combat Team, 2nd Infantry Division, calls for fire support during fire mission training at the National Training Center, Fort Irwin, Calif., on 15 August 2011.

MAJ Matthew Myer is currently the operations officer for the 6th Squadron, 4th Cavalry Regiment, 3rd Brigade Combat Team, 1st Infantry Division. He graduated with distinction from the Naval Postgraduate School where he earned a master's degree in defense analysis specializing in irregular warfare. He was recognized with the AUSA Joseph Stillwell Award for Outstanding Army Student for his graduating class. MAJ Myer's previous assignments include serving as a company commander with the 173rd Airborne Brigade, which included a combat tour in the Kunar and Nuristan Provinces of Afghanistan.

DEVELOPING A TRAINED AND READY SFAAT

LTC JARED L. WARE

"The military advisory mission has become a key component of U.S. military operations — for the Army in particular — and we need to be good at it."

— **COL Marc D. Axelberg**[1]

The purpose of this article is to provide a basic framework for developing a trained and ready security force assistance advisor team (SFAAT) based upon recent operational and training initiatives conducted by one battalion's SFAATs.

In early 2012, the 30th Engineer Battalion at Fort Bragg, N.C., was tasked by XVIII Airborne Corps to develop an SFAAT to deploy in support of operations in Afghanistan. Since that initial request, the battalion has trained and deployed one SFAAT, activated a second SFAAT, and conducted two mission readiness exercises (MRX) at the Joint Readiness Training Center (JRTC) at Fort Polk, La. Additionally, the battalion provided a robust observer controller/trainer (OC/T) team to the National Training Center at Fort Irwin, Calif., for an Infantry brigade combat team (IBCT) security force assistance brigade (SFAB) rotation enabled with a construction effects engineer battalion.

From a battalion-level perspective, it is imperative to understand the roles and missions of the SFAAT because that capability is the linkage between a brigade combat team and its Afghan military counterparts. Moreover, any mission set will be easier to achieve with Afghan partners if the SFAAT is trained, integrated, and operating at a high degree of competence.

The SFAAT individual selection process, the individual training program, and a full team-level MRX provide a strong foundation for the certification and employment of SFAATs. An SFAAT's success is due in large part to the emphasis placed on SFAAT operations by its higher headquarters. An SFAAT's effectiveness is a direct function of the quality of the individuals selected, their training certification, and their employment as a distinct and integrated team once in theater. Since most SFAAT descriptions include "advise, coach, and mentor," it is necessary to select members who are confident and comfortable conducting those tasks at both the individual and collective levels.

In his December 2011 *Small Wars Journal* article "Combat Advisor Unit for Afghanistan Transition," Morgan Smiley discussed that augmenting these types of teams with field grade officers as the lead advisors allows for the deployment of cohesive teams with the rank and experience necessary to deal with Afghan National Security Forces (ANSF) leaders, and it mitigates a clumsy manning process by creating a force structure primarily focused on advising and enabling the ANSF. Our unit selected strong field grade officers to lead the teams and combat-tested and experienced

Recommended Training Objectives
A - Create team cohesion and confidence
B - Utilize "form, storm, norm and perform" methodology; develop team standard operating procedures (SOPs)
C - Ensure individual proficiency in tasks associated with role on team
D - Ensure team members can coach, teach, and mentor while maintaining sensitivity to cultural idiosyncrasies

Home-Station Training
A - Utilize training prepared by other deploying units to baseline SFAAT personnel in self-defense
B - Leverage language/cultural training resources through the U.S. Army John F. Kennedy Special Warfare Center and School and U.S. Army Civil Affairs & Psychological Operations Command
C - Require live tissue training (LTT) and tactical combat casualty care (TC3) training for SFAAT personnel
D - Leverage instruction on "How to teach/train"
E - Complete FORSCOM/CENTCOM pre-deployment training requirements
F - Complete military occupational speciality (MOS)-specific training by position
G - Complete counter-elicitation/operations security (OPSEC) training

Concept of Training
A - Temporary duty (TDY) and mobile training team (MTT) training requirements timeline
B - Home-station training timeline
    Weeks 1-2: Individual training
    Weeks 3-5: Teaching, counter-elicitation/OPSEC/cultural/language training
    Week 7: Medical training
    Weeks 9-11: Individual MOS training
C - MRX: JRTC rotation cycle
D - Post-MRX training: Continue individual MOS training, cultural training, land navigation

Issues
A - Unit earliest arrival date/latest arrival date (EAD/LAD)
B - Sourcing weapons/commo/equipment
C - Exception to policy for weekend training

Figure 1 — SFAAT Training Construct

NCOs to serve in the SFAAT. To increase the overall credibility of the SFAAT with its in-theater counterparts, all advisors developed proficiency in basic combat skills to include warrior skills and survival skills. Since these skills are critical to an advisor due to the isolated and independent nature of the mission, advisors were expected to refresh them during the various phases of pre-deployment training.[2] Once baseline proficiency is gained in these

skills, it is imperative to test the SFAAT during an MRX to validate individuals' skill sets, collective training tasks, and team dynamics under a realistic operational environment.

SFAATs from the United States and other Northern Atlantic Treaty Organization (NATO) member organizations have identical minimum training requirements. This is directed by the commander of the International Security Assistance Force (ISAF) and is further outlined in memorandums from the commanders of the U.S. Central Command (CENTCOM) and Allied Joint Force Command Brunssum (JFCB) to the regional commands (RCs) and headquarters (HQ), ISAF. The U.S. Army, U.S. Marines, and NATO countries all conduct SFAAT certification in three defined phases. Although the type and magnitude of training with respect to each phase may slightly differ, there is commonality in the training topics. These topics include individual and collective combat skills training, advisor training, and an MRX for final certification. Figure 1 is an example of what our battalion used for its SFAAT training construct.

A certifying team-level MRX is vital to validating the strength, skill, and credibility of the team prior to its deployment. In his article discussing mentoring ANSF units, Canadian Lieutenant Colonel (now Brigadier General) W.D. Eyre stated, "Mentoring efforts and advice will fall on deaf ears unless the ANA (Afghan National Army) sees the source as being credible."[3] After serving as the senior engineer OC/T at NTC during the 13-01 SFAB rotation, the aspect of credibility became more evident to me with respect to any SFAAT. This rotation for the 2nd Brigade, 10th Mountain Division included two National Guard brigades reorganized into 64 separate SFAATs. The training format at NTC followed a similar pattern as conducted at JRTC. Current training regimens, particularly those at the training centers, rely heavily on situation training exercises to examine a potential advisor's situational response in a particularly complex environment. This is important to training advisors because situational training exercises are valuable in assessing responses from individuals in new and difficult situations, particularly in the context of another culture.[4] Having a cadre of personnel to evaluate each SFAAT, as well as relevant scenarios with realistic role players, provides the most optimal environment for determining the strengths and shortfalls of any SFAAT undergoing the training.

Given the SFAAT training framework with a JRTC rotation, it is reasonable to expect that the training principles would provide any team with the baseline capabilities to operate effectively in theater. With this framework, the XVIII Airborne Corps' SFAAT team from the battalion qualified as the top SFAAT of the 25 participating SFAATs during that specific JTRC rotation. However, to achieve mission success, it is incumbent upon an SFAAT to complete all individual training certifications and complete a credible, unbiased MRX (either JRTC or NTC) to fully prepare for the complexities and challenges of SFAAT operations in theater. Even with a solid training and certification program, areas for improvement still exist, particularly for a SFAAT once it arrives in theater and begins its mission for its higher headquarters and with its ANSF partners. LTC Joshua Potter, a former advisor, wrote, "In order to support their prescribed role, planners must take careful design in the organization and resourcing of military advisors either employed as a unit or as individuals."[5]

The topic areas listed below are mainly based upon the feedback I have received with respect to the initial SFAAT's employment once in theater. Although the observations are limited in scope, I found the same trends were common in discussions with previous SFAAT advisors, the SFAAT in theater, and with OC/Ts during the NTC rotation:

Mission — In theater, key leaders at the brigade level tend to lack a sophisticated understanding of the SFAAT's mission and role. This leads to the inability to correctly employ and utilize the SFAAT's full capabilities. This has resulted in certain team members being assigned to perform traditional staff functions instead of their individual SFAAT role. For example, one member of the SFAAT was assigned to the brigade engineer cell and one member was assigned to the governance stabilization and transition team (STT). This broke the SFAAT team integrity model, degraded its overall effectiveness, and impeded the ability of the SFAAT to establish a high level of rapport

Photo by SGT Jon Heinrich

A Soldier with the 1st Brigade Combat Team, 101st Airborne Division gives a class on weapon handling to ANA soldiers at Combat Outpost Fortress in Kunar Province, Afghanistan, on 12 March 2013.

with ANSF counterparts. During the NTC rotation, leaders within the BCT were reassigned from their modified table of organization and equipment (MTOE) position to fill SFAAT positions without the requisite individual training prior to their assignment into an SFAAT. This created confusion as to what role the individuals would assume within the SFAAT, as they were not fully trained to take on the various tasks required within the SFAAT.

Metrics — The reporting of credible counterinsurgency (COIN) metrics requires proper SFAAT-led and SFAAT-reviewed assessments. Credible metrics cannot be properly evaluated at the brigade level without a credentialed SFAAT in place. In certain instances, the in-theater brigade reported higher levels of ANSF preparedness than that evaluated by the SFAAT. For example, ANA companies had leaders who were not capable of performing basic military decision-making process (MDMP) tasks or troop leading procedures. However, it was being reported that these units were prepared for unilateral missions based solely upon individual task assessments vice collective-level assessments as defined by COIN metrics evaluated by the SFAAT. Moreover, it is incumbent upon the SFAAT to immediately establish its credibility with both its higher headquarters and its ANA counterpart. During the recent NTC rotation, I viewed a combat outpost defense in which the SFAAT and ANA counterparts (role-played by Fort Irwin Soldiers) had not even met prior to the defensive operations, thus skewing any type of credible COIN assessment of the subsequent operations. This led to various interpretations of the overall readiness of the ANA unit, reduced the initial credibility of the SFAAT, and led to a "metric's mismatch" between the SFAAT and its higher headquarters.

Sustainment — As a non-MTOE unit, the SFAAT lacks a baseline logistical support package required to properly deploy and sustain itself until employment into theater. The SFAAT is entirely dependent upon its higher headquarters and outside resources for all sustainment activities. Without a well-established command and support relationship, the SFAAT simply cannot function outside of its assigned operational role, and even then it is only for a limited duration due to a lack of sustainment. The advisor team still requires communications, logistics, and force protection support, and the BCT commander must rely on the advisors to provide the input required for coordination of joint patrols and daily actions of the advised force.[6] One example from the SFAAT in Afghanistan is that upon arrival and link up, its higher headquarters provided the team four vehicles, three of which were non-mission capable. The SFAAT does not have organic maintenance support and lacks a funding source to purchase vehicle parts or contracted services. A major issue at NTC was the availability and fielding of Blue Force Tracker and communications equipment to the various SFAAT teams and any subsequent logistical support to the communications equipment. Given the expanse of sustainment challenges to support multiple SFAATs, it is recommended that any BCT deploying in support of an SFAB mission strongly consider not reorganizing its organic brigade support battalion (BSB) into SFAATs, as the BSB is vitally important to the overall sustainment of all SFAATs from the BCT. The advanced logistical support provided by the BSB is the key to sustaining a BCT's worth of SFAATs in a brigade's footprint.

Recommendations

* **Ensure every person on the SFAAT completes all required**
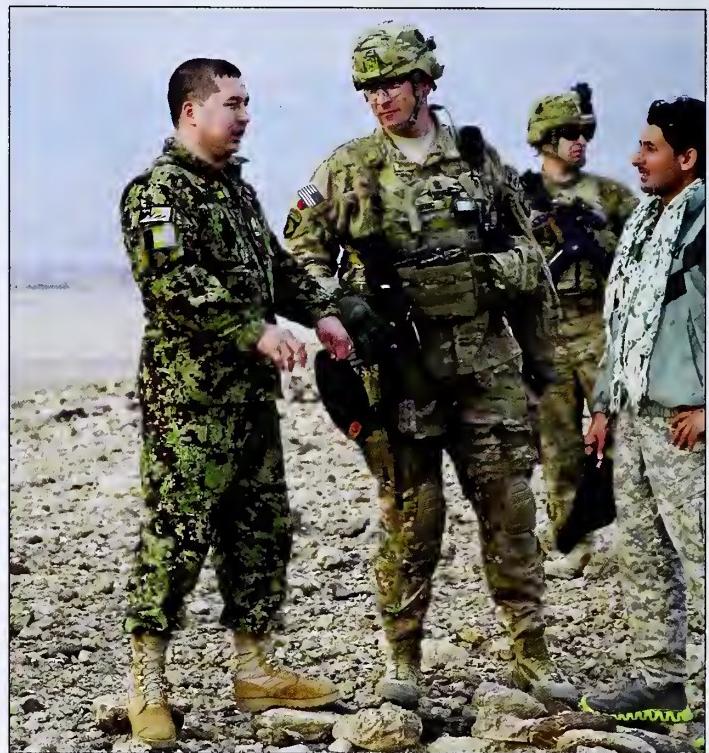
Photo by SPC Ryan Hallgarth

A 101st Airborne Division Soldier speaks to his Afghan counterpart about ongoing operations near Jalalabad on 14 January 2013.

theater training requirements and that the team itself conducts a credible MRX, preferably as an established team. The JRTC Advisor Academy provides premier training to SFAATs during training rotations. The program consists of language training, cultural training, key leader engagements (KLEs) with retired ANA, and understanding the advisor role in a deployed theater per FM 3-07.1, *Security Force Assistance*. When talking about his team, one SFAAT leader in a previous rotation remarked, "Security force assistance is the unified action to generate, employ, and sustain local, host-nation, or regional security forces in support of a legitimate authority."[7]

* **Building and sustaining team integrity is paramount to SFAAT operations.** This allows for all personnel on the team to know their teammates are prepared and ready to assume their roles. It also allows individuals to learn one another's strengths, as well as the areas that require additional focus, prior to linking up with ANSF counterparts. Regarding NTC Rotation 13-01, one battalion commander remarked that the NTC experience helped with the execution of their mission in Afghanistan because there were a lot of unclear things between the initial coordination efforts.[8] It is important to build the team integrity during any training rotation, but it is equally important to sustain it into the deployment, as many valuable lessons were gained in the overall training framework. Building and sustaining team integrity will eventually prove successful in theater for the SFAAT.

* **Establish peer-to-peer advisory relationships.** All SFAATs should be able to properly advise their ANA/ANSF counterparts at the command and staff levels, and ensure that the process occurs in parallel — in addition to vertically and horizontally. This includes sourcing SFAAT positions with personnel of the proper

rank and experience level who can engage and advise counterparts at all levels. Personnel selected for advisory duties must be adept at the tasks and functions with which they are charged to train others and must possess the proper attributes to be effective advisors. Furthermore, it is important to provide advisor-specific training to each SFAAT member prior to having them mentor ANA forces.[9] With a proper SFAAT structure in place, coupled with trained and vetted personnel, a more effective, accurate, and credible assessment of established COIN metrics can be attained, reducing ambiguity for any ANSF readiness assessments.

* **Deploy cohort SFAATs that are either organic or assigned to a brigade prior to a deployment (brigade security force assistance teams).** This would provide the teams with an established command and support relationship and a dedicated brigade-level staff to address any requirements. Moreover, it would address any mission and sustainment gaps as the brigade would have a dedicated SFAAT missions and the resources required to meet mission success. Additionally, allow the SFAAT team leaders time to influence pre-deployment training at Phase II training centers, develop mission specific TTPs, and prepare SOPs. This proved to be successful at NTC for the entities that followed the aforementioned training framework.

It would be presumptive to imply that the recommended solutions could be extrapolated to address all issues associated with developing and training SFAATs. However, the proposed recommendations can be applied to any future SFAATs and their specific training requirements with reasonable validity. By properly applying the training framework and the training principles, it can be reasonably expected that any SFAAT would have the baseline knowledge and skills to adequately perform its in-theater mission.

Notes

[1] COL Mark Axelberg, "Enhancing Security Force Assistance: Advisor Selection, Training, and Employement," U.S. Army War College Strategy Research Project, 22 March 2011, 27.

[2] FM 3.07-1, *Security Force Assistance*, May 2009, 7-4.

[3] LTC W.D. Eyre, "14 Tenets for Mentoring the Afghan National Army," *The Bulletin*, Vol. 14, No 1 (March 2008), 1-9.

[4] MAJ Brendan Cook, "Improving Security Force Assistance Capability in the Army's Advis and Assist Brigades," School of Advanced Military Studies monography, 10 May 2010.

[5] LTC Joshua J. Potter, *American Advisors: Security Force Assistance Model in the Long War,* Combat Studies Institute Press, 2011.

[6] Axelberg, "Enhancing Security Force Assistance."

[7] CPT Colby K. Krug, "When Combat Advising Equals Company Commander," *Engineer*, January-April 2013, 40.

[8] SSG Jennifer Bunn, "National Training Center Brings Change to 2-14 Infantry," 24 October 2012, http://www.army.mil/article/89897/NTC_rotation_brings_change_to_2_14_IN/

[9] MAJ Sean R. Pirone, "Security Force Assistance, Strategic, Advisory, and Partner Nation Considerations," Naval Post Graduate School thesis, December 2012, 47.

LTC Jared L. Ware is currently serving as commander of the 30th Engineer Battalion, Fort Bragg, N.C. He previously served as program manager of Foreign Military Sales Construction, Multinational Security Transition Command - Iraq, J7 Engineering Directorate. LTC Ware graduated from the U.S. Military Academy at West Point, N.Y., with a bachelor's degree in human/regional geography. He has also earned master's degrees from Missouri University of Science and Technology (engineering management) and Cranfield University in Shrivenham, England (defense geographic information). LTC Ware would like to thank MAJ Jermaine Walker and 1LT Dominic Sentero for their operational SFAAT perspectives and the Puma Team at NTC for support provided during Rotation 13-01.

Figure 2 — Example NTC COIN Metrics

Subject/Area	NA	1	2	3	4	5
Key Leader & Indigenous Engagements	Not conducted/ observed	Soldier avoids individual interaction with civilians and media. No preparation conducted at staff or subordinate unit level to conduct negotiations or daily interaction with local populace. Staffs not producing focused priority information requirements (PIR), Information Operation (IO) themes and messages, and media talking points	Unit identifies all key leaders (formal/informal) in their area of operation (AO) accurately and has them included in their PMESII/ASCOPE. Properly confirms with local key leaders without offending or further distancing them from coalition forces.	Negotiations conducted to standard*	Unit identifies an intended outcome, conducts mission analysis, wargames potential variations with talking points, and rehearses the principle. Unit conducts hotwash following negotiation and identifies future replacements.	Zone of possible agreement (ZOPA) and best alternatives to a negotiated agreement (BATNA) are identified for the principle and the counterpart. A recorder is present and prepared to provide objective input throughout to help the principle. Unit conducts thorough hot wash following negotiation, identifies future requirements and completes association linkage.
		* The principle conducts the engagement with a stated identified outcome; staff prepares a general engagement preparation sheet to include background information on the principle's counterpart.				
Cultural Understanding	Not conducted/ observed	Soldiers are making no attempt to understand the local religious, family, and gender cultural dynamics.	Unit has smart cards and is attempting to display sensitivity towards cultural differences.	Cultural understanding conducted to standard*	All Soldiers have thorough understanding of cultural differences and implement their knowledge into operations.	Soldiers have complete knowledge of religion, family, and gender considerations. Unit is implementing cultural understanding into focused PIR, thorough patrol in-briefs and debriefs, and rehearsals. Soldiers understand the relevance of Arab religious holidays and their impact on friendly operations and enemy TTPs.
		* Soldiers and leaders use common and accepted hand gestures and body language in normal conversation and carefully treat major differences such as gender considerations during each meeting or during all contact with indigenous personnel.				
Language	Not conducted/ observed	Soldiers have no knowledge of basic Iraqi language or communication gestures; no formal individual or collective training conducted at unit level.	Communication gestures used and some key words integrated into operations. Soldiers don't have or aren't using language cards/aids. Interpreters not integrated.	Language conducted to standard*	Use of language tools while interacting with locals. Leaders are enforcing key phrase memorization and rehearsals with interpreters.	Unit integrates on-hand trained or native linguists. Unit is communicating effectively with locals at all levels.
		* Language cards/aids are on hand; use key phrases and language customs; and integrate interpreters.				

TRAINING FOR THE ENEMY UAV THREAT

CPT JEREMY M. PHILLIPS

A large number of senior Army leaders are preaching a return to the kind of operations that occupied the Army's training focus before 9/11. As we move back to core competencies and basic military occupational specialty (MOS)-specific skills, there are some doctrinal and tactical gaps in our reaction to near-peer enemies.

Direct action rotations have started again at the National Training Center (NTC) at Fort Irwin, Calif., but it is still difficult for commanders and small unit leaders to conceptualize a sophisticated, mechanized opposing force (OPFOR) with warfighting capabilities that match ours. No doubt some of this inability is a result of not having faced a competitive mechanized or armor enemy in many decades and focusing so intently on counterinsurgency (COIN) and military operations other than war (MOOTW) for the last 11 years. One specific enemy capability that most commanders and tactical leaders may be unprepared for is the deployment of enemy intelligence collection assets (IC), specifically unmanned aerial vehicles (UAVs).

A recent article in *Foreign Policy* by Marine LtCol Lloyd Freeman is characteristic of the misunderstanding American officers have about UAVs. His bold assertion for the future of warfare is that "[l]and forces will no longer win wars. Computers, missiles, planes, and drones will." I submit that computers, missiles, planes, and drones will be important, but no serious strategist will discount the importance of formations of Armor and Infantry to any protracted military engagement. This lesson has had to be learned again and again by militaries all over the world in conflicts where merely deploying Special Forces or heavy bombing campaigns failed to achieve a decisive result. For examples of this, we can study the Balkans, Chechnya, and Vietnam — three countries in which enormous bombing campaigns failed to destroy or demoralize tenacious ground forces. LtCol Freeman is right to focus on IC assets and high-dollar system capabilities, but it is just as important to prepare for our future enemies' technology as it is to develop and field our own. It will be our countermeasures and our own protection capabilities against observation and strikes executed by enemy unmanned platforms that will guarantee our freedom of maneuver on the battlefields of the future.

The last five years have seen a boom in unmanned aircraft systems (UAS), both in civilian and military applications. This expansion in technology has not been limited to the United States. In 2011, Iran claimed it captured a U.S. UAV. Iranian reverse-engineering might take time, but they are not the only ones working on matching our intelligence collection capabilities. Small Unmanned Aircraft System (sUAS) News reports regularly on China's UAV fleet, which is growing in size and sophistication. Let us not forget either that it is easier than ever to make remote control airborne vehicles that possess surprising agility or capabilities in a well-equipped garage. An Egyptian classmate of mine at the Maneuver Captains Career Course (MCCC) at Fort

Benning shared the story of a battalion commander in his army that did just that, creating three small UAVs out of remote-controlled airplanes that could be controlled from inside a military vehicle. With observation of the opposing force (OPFOR) formations, his battalion easily won the next round of force-on-force exercises.

Our myopia cannot be entire blamed on tactical leaders; not every commander will foresee every future problem. Few if any Army ground force commanders have encountered enemy UAVs, and Army doctrine and informational literature do not seriously consider enemy IC assets. The Project Office for Unmanned Aviation Systems, which falls under the Program Executive Office for Aviation, is charged with development, fielding, and logistics, which seems comprehensive, but what about a project office for building anti-UAS weapons? ATTP 3-04.15, *Multi-service Tactics, Techniques, and Procedures for Unmanned Aircraft Systems*, is an excellent guide to the use of UAS, but it does not describe enemy system capabilities or counter-surveillance techniques. This is tantamount to an Infantry manual that only discusses offensive operations, leaving defensive preparations to the imagination of the reader. To defeat enemy close combat attack (CCA) or close air support (CAS), the Army has fielded phenomenally successful weapons like the Javelin, Stinger, and Avenger. We expect to have air superiority because we will counteract the enemy ground installations with high-speed anti-radar missiles (HARM), enemy aircraft with ground-to-air missiles, and enemy missiles with Patriot batteries. Why don't we give the same thought to the battle

A Soldier with the 3rd Brigade Combat Team, 25th Infantry Division launches a UAV during training at Schofield Barracks, Hawaii, on 14 November 2012.
Photo by SGT Hillary Rustine

for low-level air superiority? The battlefield of the future might well be crisscrossed by drones of all sizes, and ours will not be the only ones carrying missiles.

There is one place where enemy UAVs are integrated into training, and that is during NTC direct action rotations. I recently completed a direct action rotation at NTC as the executive officer for a mechanized Infantry company in a combined arms battalion. During a deliberate area defense, my company — securing the right flank of the brigade's area of operation (AO) — had the challenge of integrating air defense artillery (ADA) protection assets which were attached at the last minute. Because my commander conscientiously utilized all combat multipliers, he ensured that the senior NCO in the Avenger section gave him a capabilities brief and assigned them a position inside our assembly area hidden by an intervisibility line. We established our battle positions, hide positions, and rehearsed our course of action (COA) for about 36 hours before the anticipated enemy attack. Although we did not receive direct or indirect enemy fire, we did experience one form of contact for which we were not prepared — aviation, specifically by an OPFOR Raven UAV.

The morning that the enemy attack was anticipated, our two Infantry platoons and attached armor platoon, with one section of tanks in reserve, moved to their hide positions and began to scan their sectors. After a couple of hours, one of the Bradley commanders reported a small UAV loitering overhead. He may have even called it a "Raven." Our reaction was: nothing. The UAS quickly disappeared. If the enemy had sent their IC assets an hour later, they would have discovered our battle positions instead of our hide sites and been able to fire accurately.

This vignette is just one example of the lack of preparation for contact with enemy UASs that is taking place at the company and platoon levels. In the short term, units — especially units preparing for a CTC rotation — need to plan for aerial surveillance and develop standard operating procedures (SOPs) for reacting to unmanned IC assets. A dedicated air guard or rigidly enforced priority information requirement (PIR) that included the presence or absence of UAS in the AO could lead to enemy IC

LINE	INFORMATION	EXAMPLE
1	Unit call sign and frequency	Red 1, FHXXX
2	Unit location	6- or 8-digit grid
3	Location of IC asset	Grid or distance and direction from reporting unit location
4	Time IC asset spotted/detected	DTG
5	Estimated time on site	Was IC asset approach observed or was it spotted overhead? How long might it have been there?
6	Flight characteristics	Is IC loitering in one spot (possibly already spotted reporting unit), is it flying straight (en route to loitering location), or is it flying randomly (searching)?
7	Estimated size, elevation, and physical description	Wingspan, height, color, tail configuration, etc.

Figure 1 — Suggested Format for Reporting Enemy IC Assets

assets being spotted before they can see us so appropriate action can be taken. Because some UAV have fixed cameras that show only a tiny portion of the battlefield, often compared to looking through a straw, an attentive air guard could quite possibly spot a UAV before it can spot them. During our defense, we had not talked about an air guard in the operation order so we were thoroughly explored. Our company was already using hide positions to deny enemy forward observers the ability to pinpoint our battle positions and preplan fires, and this was a successful tactic. During our end-of-rotation after action review (AAR), we saw the picture the OPFOR Raven took and our battle positions could not be identified. We could have hidden even better if we had used camouflage netting over the turrets of some of the Bradleys and tanks. This could have led to the enemy gaining an incomplete picture of our composition as well as our position.

At an absolute minimum, any complete battalion SOP should include a reporting format for enemy UAS, and that report should be practiced during situational training exercise (STX) lanes before deployment to a combat zone or CTC rotation. A suggested format for reporting IC assets is outlined in Figure 1.

These are all quick fixes that require no additional resources except time during training. As a long-term goal, the Army should develop anti-UAS devices. Being able

to destroy the enemy's capability to control unmanned platforms either by jamming the signals to and from a UAS, disabling the cameras onboard, or physically destroying them will be an invaluable asset for ground combat commanders. LtCol Freeman has a very good point — without protection from unmanned aircraft "on today's battlefield, movement means death."

In any case, commanders must plan for all eight forms of contact, including aviation in the form of UAVs. CTC rotations stress the existence of near-peer competitors for a reason; the technology gaps between our Army and the most advanced conventional armies around the world are shrinking quickly. UAV technology, especially the smaller ones deployed at the company level, are extremely low-tech compared to the fighters, tanks, and armed UAVs on which military journalists usually focus. It is not inconceivable that some day one of the hooah videos of UAVs destroying unsuspecting dismounts will have to be subtitled for American audiences. Let's be prepared for that day.

CPT Jeremy M. Phillips is currently a student at the Maneuver Captains Career Course at Fort Benning, Ga. His previous assignments include serving as a rifle platoon leader and company executive officer with the 1st Squadron, 12th Cavalry Battalion, 3rd Brigade Combat Team, 1st Cavalry Division. He graduated from the U.S. Military Academy at West Point, N.Y., with a bachelor's degree in literature.

CAVALRY LEADERS' COURSE:

MORE THAN 25 YEARS OF TRAINING CAVALRY PROFESSIONALS

MAJ RYAN J. GAINEY
CPT JOE BYERLY
CPT BRIAN J. HARRIS

Since its creation in 1987, the Cavalry Leaders' Course (CLC) has answered the call of the force to provide training to leaders of reconnaissance organizations. Over the years, we have adapted our focus as the reconnaissance community has shifted from high-intensity conflict to counterinsurgency to present day decisive action operations.

The new course consists of a 15-day training curriculum that concentrates on the understanding of fundamentals in addition to the tactical procedures required to conduct reconnaissance and security operations at the troop level in support of unified land operations.

A CLC graduate will:

Be a subject matter expert on recon and security fundamentals — Understand the effect of fundamentals applied to maneuver tactics; apply the fundamentals into planning through synchronization, task/purpose, and timelines; and demonstrate the ability to train fellow leaders in the fundamentals and increase organizational understanding/application.

Demonstrate application of mission analysis — Demonstrate improved ability to assess terrain and its impact on maneuver and observation; demonstrate improved ability to assess enemy forces capabilities, disposition, and COAs; and demonstrate improved understanding of Cavalry task organization and capabilities.

Demonstrate mission command — Effectively communicate through written (graphics) and verbal orders; prioritize recon objectives through effective resource allocation; understand higher commander's critical information requirements (CCIR); and develop commander's guidance that effectively communicates intent.

Integration of supporting assets — Demonstrate understanding of unit/system and supporting range/distances; employ collection assets effectively; and demonstrate the ability to effectively plan the employment of air- and ground-based fires to support recon and security operations.

The course has modified its format to align with Army Learning Model 2015, which emphasizes experiential learning and shifts content delivery from instructor-led to instructor-facilitated. By avoiding the "sage on the stage" technique, the CLC challenges students to expand their knowledge base through research and peer-to-peer learning, thus refraining from "spoon feeding" material and fostering a "checklist mentality." The use of 12 tactical decision exercises (TDEs), a Cavalry operations adaptive planning exercise (COAPEX), and professional reading and discussion guides a CLC student through the experiential learning model.
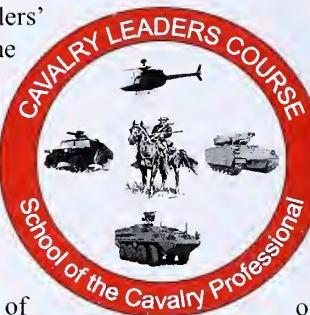
TDEs

The TDEs range from simple problem sets to complex hybrid scenarios covering the full gamut of traditional Cavalry missions. Operating in a time-constrained environment, students will conduct detailed terrain and enemy analysis to develop a tactical plan that is briefed for peer evaluation. This phase is critical to the learning process as it provides feedback to the presenter and reallocates ownership of knowledge to the students who must demonstrate their own understanding of the concepts through their questions and critique of the presentation. Peer evaluation allows the instructor to evaluate the students while simultaneously guiding group discussion and expanding student knowledge through the mentorship process, further diminishing the "instructor vs. student" mentality that is apparent in instructor-led models.

COAPEX

The COAPEX is a three-day event that centers on planning and integration of assets at the squadron level. For the exercise, students are divided into three-person groups, and emphasis is placed on intelligence, maneuver, and sustainment planning. The course has steered away from teaching and executing the traditional military decision-making process (MDMP), adopting a focus on identifying, and solving complex problems.

On Day 1, the students receive a hybrid threat scenario that requires their reconnaissance squadron to conduct a zone reconnaissance of a foreign city in a failed state to prepare for maneuver battalions' beginning operations. They plan operations for a 72-hour period and brief the class at the end of the day.

On Day 2, each group receives a list of tailored significant activities (SIGACTS) that took place during the 72 hours after their initial H-hour planning, along with updated priority intelligence requirements (PIR) from the brigade. Students are required to prioritize their lines of effort and conduct a second iteration of planning for a second 72-hour period.

On Day 3, groups receive a fragmentary order (FRAGO) from the brigade requiring them to establish a guard south of the city to defend against conventional forces moving north. Students are given limited time to plan and brief the mission before assuming roles of the troop commanders, writing detailed operations orders for their final task of the course.

The COAPEX allows students to see the importance of planning and synchronization at the squadron level and how it can poorly or positively affect operations at the troop level.

Professional Reading and Online Discussion

In the 1990s, the CLC was among the first schools to utilize the Force XXI training program. The program allowed students to interface via the internet directly with subject matter experts from the National Training Center (NTC) at Fort Irwin, Calif., and around the force, considerably broadening in-class discussion.[1]

The course has reintroduced this concept with an online forum. Each night, the students receive 1-2 hours of professional reading that cover a myriad of topics ranging from historical vignettes to articles on mission command. Students share their thoughts and experiences in response to the reading through online message boards and classroom discussion. The message board, found on the CLC milBook page (https://www.milsuite.mil/book/groups/the-cavalry-leaders-course), enables students to extend discussions beyond the classroom and onto a professional forum accessible by leaders throughout the force. This knowledge crossover allows students to not only learn from each other, but also from military leaders with varying backgrounds and experiences. These collaborative online discussions enhance the learning experience of the student while also generating additional topics and ideas for the instructor to lead in class professional discussion.

Not Just for Armor Officers

Since its initial inception, the course has traditionally focused on training post-career course maneuver captains slated to command a Cavalry organization. While this remains true for the majority of the student population, we have expanded the course to encompass the maneuver community's senior NCOs (E-7 to E-9) who are either preparing to serve or are currently serving as troop first sergeants or squadron operations sergeants major.

This will allow NCOs to achieve a better understanding of reconnaissance and security (R&S) operational planning and, more importantly, how to effectively integrate their concept of support into these operations. Also, the vast experiences these NCOs have often bring a unique perspective to the small group during the multitude of collaborative exercises and discussions conducted throughout the course.

In addition to NCOs, CLC also provides a great opportunity for Infantry officers without Cavalry experience who are selected to command a Cavalry troop to garner a better appreciation for R&S operations. Since successful Cavalry operations have always been a combined effort across several of the warfighting functions, the course is open to officers and NCOs from all branches that support reconnaissance operations.

An S6 who has a clearer understanding of what a troop does is better able to develop a communications plan that supports the entire squadron. A fire support element commander who understands the logistics and complexity of screen and guard operations will be better prepared to train his Soldiers who support these types of missions. In opening up our doors to leaders from other warfighting functions, we've found that their participation has greatly enhanced the overall effectiveness of this course.

Bringing CLC to You

CLC has greatly expanded its reach to the operational force through the use of mobile training teams (MTTs). In FY 12, CLC conducted nine MTTs, which included the Joint Multinational Readiness Center (JMRC) in Germany, NTC, the Marine Corps School of Infantry Light Armor Reconnaissance Course, and several National Guard units supporting pre-deployment and annual training (AT) events. The limited resources required to conduct a CLC class makes an MTT a lucrative option for most active and National Guard units. For the cost of sending one Soldier on temporary duty (TDY) to Fort Benning for a residential class, a unit can fund one CLC instructor to travel to home station to conduct a course, training up to nine leaders.

While some MTT courses may differ slightly from their residential counterparts, CLC is able to fully replicate its lesson plans on the road. This ensures that a CLC graduate is the same no matter the location.

In addition to standard MTT classes, CLC cadre have provided unit mentorship during training center rotations and home-station

Photo by CPT Joe Byerly

SFC Mark Leavens issues a troop-level operations order to fellow students during the reconnaissance phase of the CLC. The course provides a great opportunity for Infantry officers without Cavalry experience who are selected to command a Cavalry troop to garner a better appreciation for R&S operations.

training events, as well as augmenting unit staff training to assist squadron staffs in planning R&S-centric scenarios. Though these additional events are not Army Training Requirements and Resources System-coded training, they provide units with Cavalry subject matter experts who can be used to refine their current products and tactics or to simply "re-blue" Cavalry leaders in doctrine and techniques.

The wide range of MTT experience has resulted in a strong relationship between the cadre and both operational units and training centers. This relationship means that the CLC cadre is up to date with current tactics, trends, and task organizational changes being used across the Army. Coupled with our close link with the R&S doctrine writers at the Maneuver Center of Excellence, CLC cadre are a powerful tool for Cavalry commanders to use in training and evaluating their formations.

Course Contact Information

Course administrative officers are currently located in Patton Hall on Fort Benning. Leader resources, professional reading and discussions, and course and instructor contact information are located on the course milBook page (https://www.milsuite.mil/book/groups/the-cavalry-leaders-course).

As we move towards a new phase in our Army's history, CLC continues to be the only source for Cavalry training for troop-level leadership. This course will ensure that leaders are taught "how to think rather than what to do, [which is] central to building mental mobility and ensuring the ability to function in any operational environment."[2]

Soldiers from 1st Squadron, 10th Cavalry Regiment, 2nd Brigade Combat Team, 4th Infantry Division drive their M3A3 Bradley Fighting Vehicles to reach a phase line where they will move into a defensive posture during platoon scout training at Fort Carson, Colo., on 26 January 2013.

Photo by SSG Andrew Porch

Notes

[1] Dr. Robert S. Cameron, *To Fight or Not to Fight? Organizational Trends in Mounted Maneuver Reconnaissance from the Interwar Years to Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute Press, 2010).

[2] Ibid.

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MAJ Ryan Gainey is an instructor for CLC, 3rd Squadron, 16th Cavalry, Fort Benning. His previous assignments include serving as commander, B Troop, 1st Squadron, 3rd Armored Cavalry Regiment (ACR), Fort Hood, Texas (Operation New Dawn, 2010-2011); squadron planner, 1/3 ACR; team chief of Military Transition Team 31, Babil Province, Iraq (Operation Iraqi Freedom 2008-2009); surveillance troop executive officer, D Troop, 2nd Squadron, 1st Cavalry Regiment, 4th Brigade Combat Team, 2nd Infantry Division, Fort Lewis, Wash; and anti-tank platoon leader, H Troop, 2nd Squadron, 2nd ACR Fort Polk, La. (OIF 1). MAJ Gainey earned a bachelor's degree in health and exercise science from Northwestern State University in Louisiana.

CPT Joe Byerly is also a CLC instructor, 3-16 Cavalry. His previous assignments include serving as the plans officer for the 2nd Armor Brigade Combat Team, 3rd Infantry Division, Fort Stewart, Ga.; commander of Headquarters and Headquarters Company, 1st Battalion, 64th Armor Regiment, and C Troop, 3rd Squadron, 7th Cavalry, Fort Stewart; and plans officer for 3-7 Cavalry. CPT Byerly earned a bachelor's degree in criminal justice from North Georgia College and State University.

CPT Brian Harris is course manager/instructor for CLC, 3-16 Cavalry. His previous assignments include serving as commander of A Troop, 1st Squadron, 17th Cavalry, 82nd Airborne Division, Fort Bragg, N.C.; assistant S3 plans officer and tactical operations officer/pilot-in-command, B Troop, 1-17 Cavalry; and mortar platoon leader, HHC, 2nd Battalion, 72nd Armor, 2nd Infantry Division, Republic of Korea. CPT Harris earned a bachelor's degree in history from the University of Central Florida.

Book Reviews

Battlefield Sniper: Over 100 Civil War Kills
By Lt.Col. Tom C. McKenney
England: Pen and Sword Books, 2009, 400 pages
Reviewed by LTC Keith Everett

This brutal Civil War story of Confederate scout-sniper Jack Hinson and his relentless, methodical killing of a probable 100-plus Union soldiers is told by Tom McKenney, a retired Marine lieutenant colonel. A Union horseback patrol captured and beheaded two of Hinson's sons, George and John, and drove the point home that spies were not tolerated by impaling their heads on the gateposts to the Hinson plantation home early in the Civil War. This brutal action propelled the 57-year old father to kill as many Union soldiers as he could. Whether George and John were truly Confederate spies, guerillas, or just innocent hunters cannot be proved, but this is a clear example of how a thoughtless act can push a neutral bystander into becoming a motivated, relentless, deadly opponent. Hinson commissioned a .50 caliber sniper rifle and proceeded to kill as many Union soldiers as he safely could from a distance.

The rifle Jack Hinson commissioned for his sniper work is a fascinating story in itself. At 18 pounds overall, the heavy barrel required a rest of some sorts. The barrel was rifled, giving the bullet a nice spin for a more accurate shot. Through careful research, the author found the actual rifle, which now is in the possession of Judge Ben Hall McFarlin in Murfreesboro, Tenn. The rifle was passed down from MAJ Charles W. Anderson, who acquired the weapon after Hinson's death and had discussed the markings on the rifle as evidence of his Union soldier kills. The author begins his book with Anderson's written description of Jack Hinson and his discussion of these rifle markings; he does an admirable job in meticulously researching the history of Hinson and his family. McKenney blends facts with family stories that had been passed down through generations to put together a fascinating story. The story picks up around chapter four, with McKenney putting together some data on the .50 caliber rifle and ammunition used by Hinson that had been commissioned specifically for his new role as a sniper.

Although the author applies the myth of Southern slave relations as often enjoying "a mutual affection with their owners, who considered them part of the extended family," he portrays the Hinson family as "kind and protective" slave owners with little or no evidence of this. The portion regarding Hinson's slaves is a stark contrast to published autobiographical slave narratives of this time period. This depiction stretches credibility some, but there is a gap in the historical record to neither prove or disprove McKenney's slant on the relationship between Hinson and his slaves. This is not a fatal flaw to the story because Hinson's treatment of his slaves is a separate issue from the sniper story.
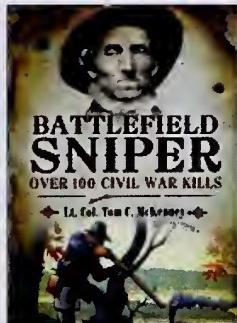
McKenney does a commendable job of weaving a fascinating story from the sparse facts he is able to collect over years of diligent research. He does the best he can to verify the accuracy of facts and then uses his military background knowledge to fill in the sizeable gaps in the Hinson family history with the probable history. The Jack Hinson story is a rich wartime story, and McKenney did a great job of researching and preserving it. After the historical background in the beginning chapters, the story picks up at an incredible pace and I found myself wanting to read more details about Hinson's sniper activities during the war. This work is recommended to anyone interested in sniping and the weapons and tactics used in sniping. It is also a clear example of how thoughtless killings can create guerillas where there may not have been such before.

The Way of Duty, Honor, Country: The Memoir of General Charles Pelot Summerall
Edited and annotated by Timothy K. Nenninger
Lexington, KY: University of Kentucky Press, 2010, 298 pages
Reviewed by BG (Retired) Curtis H. O'Sullivan
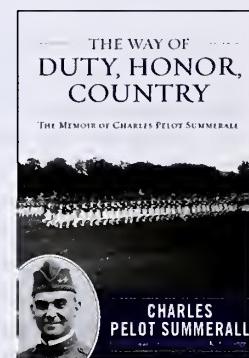
I found it hard to put this book down. It is a straightforward personal account of the life of a good Soldier — perhaps not a great one, but one who ranks high in our military. Charles Pelot Summerall was the eighth person to have the grade of full general (Washington in the Revolution; Grant, Sherman, and Sheridan after the Civil War; and Bliss, Pershing, and March in World War I). He was the 12th Army Chief of Staff, a post established in 1903, and the fourth to wear four stars in it.

Nenninger has added footnotes when needed for clarification and has left many pungent observations. Summerall was hard-nosed and had strong convictions. The names of some of those he disliked may have been deleted which is unfortunate; a fair number can be identified from the context by those familiar with the period though.

One of the striking things within this book is Summerall's rise from poverty. This is strong evidence of the role West Point has played in providing opportunities throughout the country for all levels of society. The title of the book states the path for Summerall. The steps he took were not too unusual but led him to the highest position in his profession — from a junior officer

in the Philippine Insurrection and the Boxer Rebellion to brigade, division, and corps commanding general in WWI.

My only regret is that there are no maps of those areas, but they're not really essential to his story and weren't in the memoir.

Other senior officers have gone on to later careers with the White House, State Department, etc., but Summerall's time as president at the Citadel is special. He didn't really leave the beloved Army during his tenure there from 1931-1953, when he was followed by Mark Clark.

The Way of Duty, Honor, Country is enough about his family and personal life to make this more than a military biography. It is a great story of a career during an era of dramatic change — not only for the Army but our society as a whole.

This is highly recommended for anyone with an interest in America and its Army from 1867 to 1953.

It Worked for Me:
In Life and Leadership
By Colin Powell
New York: HarperCollins, 2012,
304 pages
Reviewed by MAJ Kirby R. Dennis
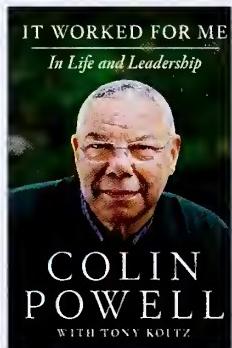
Although he has been absent from the public arena for years, GEN (Retired) Colin Powell remains one of the most celebrated and esteemed public leaders of our time. In *It Worked For Me*, Powell effectively writes about lessons learned in life and in leadership in a tightly packed memoir that is highly readable. Although there are many written accounts on one of the most celebrated military leaders of all times — including his own autobiography *My American Journey* or the impressive *Soldier* by Karen DeYoung — readers should consider Powell's latest work for its timely advice and perspective. Powell not only provides this advice with the persuasiveness and purpose of a retired four-star general, but also with a relaxed sense of storytelling that puts the reader at ease and makes for an enjoyable experience. Powell's professional resume is as impressive as any public servant in recent memory. Whether it was as a junior officer advising the South Vietnamese Army, a White House Fellow, Corps commander, National Security Advisor, Chairman of the Joint Chiefs of Staff, or Secretary of State, GEN Powell was at the center of national security events throughout his life. This gives him unique license to write on the vital topic of leadership — and we all should listen.

For those who are familiar with Powell's previous works, the opening chapter may seem a rehash of his famed "13 rules;" however, when considering his breadth of experience as a Soldier, military officer, or the nation's leading diplomat, one reads these rules with a new appreciation for their durability and application. Simple, yet valuable lessons are contained throughout the book: Personal life outside of work is just as important as the one you lead at work; treat people with respect and dignity; trust in your subordinates; and bad news doesn't get better with time. In the chapter entitled "Busy Bastards," the reader gets a refreshing perspective that is often lost in today's fast-paced environment. At the same time, Powell discusses the more sophisticated aspects of leadership in his chapter about the "spheres and pyramids" that exist within an organization and also illustrates the art of public speaking vis-a-vis the "five prominent audiences." Powell expertly uses experience and storytelling to illustrate highly applicable rules, concepts, and ideas. The future military assistant will find a blueprint for success and the aspiring business leader a model for running constructive, efficient meetings. Throughout this informative and well-constructed account, Powell provides the reader with insight that is not only interesting but also incredibly useful.

Few would dispute that Powell was among the most strategically gifted military leaders of our time, and the foundation on which he succeeded was clearly rooted in the principles about which he writes. Even more impressive, the message and lessons apply equally to the sergeant, lieutenant, lieutenant colonel, or business executive. Perhaps the greatest lesson of all is found in the middle of the book when Powell answers his own question "what is a leader?" His answer is simple: "Someone unafraid to take charge. Someone people respond to and are willing to follow." He goes on to say that leadership can be cultivated and taught over time, and that one can "learn to be a better leader. [But] you can also waste your natural talents by ceasing to learn and grow." Powell continuously reminds us that we are humans trying to master the human endeavor of leadership. The aspiring leader should pick literature wisely — as there is much to choose from. In *It Worked For Me*, one will find proven lessons in leadership that are served with wit, humor, and good cheer. More importantly, Powell articulates these lessons in a manner that will undoubtedly aid leaders in their endeavor to learn and grow.

The French and Indian War:
A Complete Chronology
By Bud Hannings
Jefferson, NC: McFarland, 2011,
344 pages, www.mcfarlandpub.
com
Reviewed by Sarah Harden
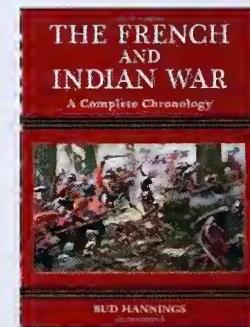
Bud Hannings is an independent historian whose other works include *Chronology of the American Revolution: Military and Political Actions Day by Day, Forts of the United States: A Historical Dictionary 16th Through 19th Centuries, The Korean War: An Exhaustive Chronology*. Born in Philadelphia on 5 June 1942, Hannings was destined to become a great writer of history.

As a young man, Hannings joined the United States Marine Corps Reserve after high school. Later, he was elected to local office and served eight years as a commissioner in Pennsylvania. Always having been interested in history, Hannings finished writing his first work, *The Eternal Flag*, in 1979. Afterwards, he started writing a history of the American flag, but when it

was rejected by a publisher, Hannings started his own publishing company in Glenside, Pa., called Seniram Publishing Incorporated (Marines spelled backwards). Hannings's first published book, *A Portrait of the Stars and Stripes*, led him to realize the hardships an unknown publisher faces without national acknowledgement. He would have given up had he not remembered his drill instructors telling him that nothing is insurmountable for a Marine and that Marines never quit. Those inspirational words and his beliefs that countless military accomplishments and lost heroes were not being recognized accordingly led to his determination and success. Today, having written numerous additional historical works since his first, Hannings is a tribute to historians and to anyone interested in the historical events that helped shape the United States.

The French and Indian War: A Complete Chronology gives a very detailed, organized, and extensive chronological look at the conflict between Great Britain and France over which empire would rule North America. The French and Indian War, known as the Seven Years' War in Europe, affected not only Great Britain and France, but also India, Africa, and the West Indies as more nations became involved. Prussia fought for control of Silesia against Austria in the Third Silesian War, another part of Europe's Seven Years' War, and once the Spanish joined and brought the war all the way across the Pacific to the Philippines, a world war had begun.

This book closely examines campaigns within the colonies, documents battles both on the land and at sea, follows Pontiac's War in 1763, and focuses on military aspects. It also covers Britain's failures to overcome France's successes, and then Britain's comeback and eventual victory. Additionally, Hannings describes the natives and how they introduced their savage warfare methods to arriving British troops as well as the Indians' actions against the settlers, the settlers' families, and the settlements. Another facet of this book is the information on individual units and men, and how many who served later became prominent naval officers, general officers during the American Revolution, and political leaders.

This immensely comprehensive work was created through research of various journals, reference libraries, state archives, papers, and historical societies. At some points during his writing process, Hannings even contacted European libraries for aid in identifying certain people. Lastly, in order to help readers better identify geographical locations while reading, Hannings deliberately uses familiar names, such as Missouri and Indiana, even though many North American locations during the 18th century were not yet the states we know today.

Hannings starts the chronology in 1748 to explain what led up to the start of the war campaigns in 1754, and he finishes in 1766 as the North American colonies began to think about an American revolution due to Britain's tight rule. Each year is broken down into chronological sections by date, month, day of the week, and location. Most times, the dates are consecutive [i.e. July 15 (Sunday) 1759, July 16 (Monday) 1759, etc.], proving the amount of research Hannings had to do in order to write such a detailed work. To provide a concrete element to all of his facts, Hannings includes many sketches of people, events, and maps along with their descriptions and where he got them from throughout the pages of this book. The preface gives a complete rundown of what the reader should expect when reading, and the introduction presents events and many of the included peoples' backgrounds leading up to their roles and involvement within the war. Appendix A lists "British Nobility of the War Era," and Appendix B lists "Men Who Became Prominent Officers or Politicians in the American Revolution."

Many times, a long chronological work can seem redundant, and *The French and Indian War* is no different. However, despite these occasional moments, this book is splendid for aspiring historians and history-buffs alike. Hannings sets out to give a detailed account of the French and Indian War, succeeding beautifully with this extensive chronological reference. Also, even though all of the events mentioned in this book cannot truly be explained or conveyed in just one volume, Hannings gives concise, yet detailed information and does not drone on and on for several pages about minor occurrences. This handbook is invaluable to students, teachers, and researchers. The easy-to-follow timeline and comprehensive appendices, bibliography, and index aid all readers in their understanding of the war. I would suggest *The French and Indian War: A Complete Chronology* to anyone interested in or needing to research North America's French and Indian War, Europe's Seven Years' War, the involvement of other nations at the time, or the names of officers and royalty during the period.

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Building the Combined Arms Team
*A Junior Leader's Ability to Conduct KLEs

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